

Estate Tamil: A Morphosyntactic Study

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**I declare that this thesis has been composed by myself and
that the research reported therein has been conducted by myself unless
otherwise indicated.**

Acknowledgment

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Abstract

The primary objective of this dissertation is to provide a syntactic analysis of morphology in Estate Tamil, a dialect of Tamil spoken in tea estates, particularly in the Haputale area, in Sri Lanka.

Tamil is significant for the theory of morphology not only because it is rich in a number of inflectional and derivational suffixes, but also because it exemplifies the co-occurrence of these two types of suffixes in the same lexical element, e.g. in participial and gerundive nouns. Further, these nouns have verbal morphology inside the nominal suffixes. Thus, the data from Tamil challenge the hypotheses that assume a distinction between inflection and derivation.

Consequently, hypothesizing that all bound morphemes with selectional properties are functional heads, I explore morphosyntactic properties of deverbal nominals. In chapter 1, I claim that Estate Tamil is a distinctive dialect, contrary to the assumption that it is the same as Indian Tamil. Chapter 2 discusses some data and the questions that they raise for the theory of morphology. I argue that the criteria suggested for determining the distinction between inflection vs derivation and lexical rules vs syntactic rules are not adequate. Consequently, suggestion is made that all bound morphs with selectional properties can be analysed syntactically. Chapter 3 distinguishes lexical and functional categories and describe some theoretical assumptions in which morphology in Tamil is analysed in this dissertation. In Chapters 4 to 6, I analyse verbal morphology because the deverbal nominals contain verbal suffixes. Chapter 7 provides an account of morphology in deverbal nominals incorporating the verbal analysis given in the previous chapters. Finally, Chapter 8 describes the implications and consequences of the morphosyntactic analysis of Estate Tamil.

The present study is significant in several ways. First, it introduces Estate Tamil to the linguistic world as a separate dialect. Second, it develops an approach which expands the notion 'functional' category to include 'auxiliary' verbs as well as nominal suffixes. Third, the analysis shows that functional categories have varying degrees of functional status. Fourth, I suggest that S-structure is a significant level of the grammar since it operates as a domain of some licensing principles. Fifth, the approach is able to explain the traditional criteria of determining 'word' in a principled way, and it partially answers the question 'Where's morphology?'.

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List of abbreviations

ABL	Ablative
ACC	Accusative
ADJ	Adjective
ADV	Adverb
CAUS	Causative
COMP	Complementizer
CON	Conjunction
CONCE	Concessional
COND	Conditional
CONT	Continuous
DAT	Dative
DUBAT	Dubitative
EMP	Emphatic
EXCL	Exclusive
EXPE	Experiencer
FEM	Feminine
FN	Finite
GEN	Genitive
GN	Gerundive nouns
GNOML	Gerundive nominalizer
HP	Honorific/polite
IMP	Imperative
IMPER	Impersonal
INCL	Inclusive
INFN	Infinitive
INSTR	Instrumental
LOC	Locative
MAS	Masculine
NEG	negative

NOM	Nominative
NOML	Nominalizer
NPOLITE	Non-polite
OBL	Oblique (base)
PART	Verbal participle
PERMIS	Permissive
PL	Plural
PN	Participial noun
PNOML	Participial nominalizer
PRES	Present tense
PRO	Pronominal suffix
PROG	Progressive
Q	Question
SELF BENE	Self benefactive
SG	Singular
SIMUL	Simultaneous
SOCI	Sociative
SPOLITE	Semipolite
SUF	Suffix
VN	Verbal noun
VNOML	Nominalizer for VNs

Chapter 1

Introduction

1.0. Goals

Morphology has been an interesting, but controversial area in grammatical theories for the last six decades. The preliminary questions such as 'what is morphology? what are the basic units in morphology? how do morphemes combine together to generate words? where does this word formation take place? and so on has been raised. In particular, in the last two decades studies have been directed to determine the domain of morphology, based on the dichotomy between inflections and derivations. Researchers within different theoretical frameworks have proposed numerous answers to the above mentioned questions drawing evidence from various languages. Some of them, as illustrated in chapter 2, assume both inflections and derivations are in the lexicon. Others argue that derivations are in the lexicon, but inflections are done in the syntax. The rest hypothesizes that word formation is in the syntax.

Tamil, a morphologically rich, Dravidian language provides good examples for the on going controversy over the domain of morphology. It has overt inflectional and derivational suffixes. More interestingly, the gerundive and participial nouns in Tamil contain inflectional suffixes inside derivations as opposed to the hypothesis that inflections follow derivational ones. The present study is motivated by these interesting data and aims at exploring morphosyntactic behaviour of inflectional and derivational suffixes of deverbal nouns. Gerundive nouns contain verb stems, tense or negative suffixes, and the nominalizer. Participial nouns have verb stems, tense or negative suffixes, the adjective suffix and one of the nominalizers. As a result, a study of the deverbal nominals in Tamil has to address not only nominal morphology, but also verbal morphology. Thus, before analyzing the nominal part of the deverbal nominals, an analysis of morphosyntactic properties of verbal suffixes is

provided. During the course of achieving this objective, the present study will show the interrelationship between the structure of word and the structure of syntax by illustrating word formation in syntax.

Data for the present study have been drawn from Estate Tamil, a variety of Tamil spoken in Sri Lanka. This form of Tamil has not been studied so far, mainly because of the misunderstanding, as expressed by Sanmugadas (1972), that Estate Tamil is exactly the same as Indian Tamil. In this introductory chapter a few sociolinguistic factors and language particular evidence, mainly phonological, will be given to show the inaccuracy of this assumption.

The sociolinguistic background of Estate Tamil, is discussed in section 1.1. This follows an illustration of differences between Indian Tamil (IT) and Estate Tamil (ET) in 1.2.1. Section 1.2.2. shows some differences between ET and Jaffna Tamil (JT). Finally, in section 1.3. methodology of the background work for this study is briefly described.

The organization of the rest of this dissertation is as follows. Chapter 2 introduces the data from the verbal and nominal morphology in Tamil and discusses how these data are problematic to the morphological theory. The discussion also includes a short history of morphological theory. Theoretical assumptions in which these data are analyzed are outlined in chapter 3. This chapter suggests that the questions raised in chapter 2 can best be analyzed assuming the functional category approach to morphology. Verbal morphology is analyzed in chapter 4-6 and the deverbal nominals are described in chapter 7. Consequently, chapter 8 outlines the outcome of the study.

To begin with, I move on to discuss the sociolinguistic background of Tamil and the peculiarities of Estate Tamil.

1.1. Sociolinguistic background

Tamil is a Dravidian language that provides a typical example of diglossia described in Ferguson 1959. Dialects of Tamil differ according to their social and geographical variations. Social dialects express distinctions such as educational and occupational status, high and low (or formal and informal) varieties and caste. The High variety, which is known as literary Tamil, is rigid and formal, and is exercised in literary works, broadcasting, and public discussions. So it remains the same regardless of dialectal differences, seen in spoken varieties. The Low variety is used in informal discussions and in communicating with family members and friends. Thus, this colloquial form, unlike the formal one, may vary considerably. Geographically, the language, mainly the colloquial form, varies from region to region not only within Tamil Nadu, where it is widely spoken,

but also outside the mainland, India.^{1, 2} Hence, all Indian dialects, disregarding their social and regional differences, are treated as *Indian Tamil* (IT) as opposed to various other Tamil dialects, e. g. *Sri Lanka Tamil*. This dichotomy between Indian Tamil and Sri Lankan Tamil has been based on a historical fact whereby Sri Lanka Tamil has some distinct features inherited from old Tamil.³ In particular, the term *Sri Lanka Tamil* in this instance refers to the dialect of Tamil spoken in the Jaffna peninsula. In addition to this form, there are several other dialects spoken throughout the island. So next, I sketch some dialect variations in Sri Lanka.

1.1.1 Tamil dialects in Sri Lanka

Tamil, one of the three official languages in Sri Lanka, is the mother tongue of the Tamil community which makes up about 18% of the country's population.⁴ It, like Indian Tamil, has several geographical and social dialects. Zvelebil (1969:356) classifies Sri Lankan Tamil into four sub-categories according to the geographical distribution of the native speakers.

- 1 a. The Northern dialect, spoken in the Jaffna peninsula;
- b. The Northeastern dialect spoken in the Trincomalee district;
- c. The Southeastern dialect spoken in the Batticaloa district; and,
- d. A mixed variety spoken in Colombo.

The first three dialect groups in 1 have been spoken for centuries in northern and eastern parts of Sri Lanka. Therefore, disregarding dialectal differences they are generally called *Sri Lanka Tamil*. At the same time, as mentioned previously, some Tamil scholars such as Sanmugadas (1972), Thananjayarajasingham (1972b), Suseendirarajah (1967, 1970, 1973b) among others

¹. Tamil is spoken in several other countries such as Sri Lanka, Indonesia, Vietnam, New Caledonia, Tahiti, South Africa, Zimbabwe, Guadeloupe, Cayeme, Surinam, British Guiana, Trinidad, Malaysia, Singapore, Fiji, and the West Indies.

². See Karunakaran (1971:245-295) for "a comparative sketch of the distinctive linguistic features" of seven Indian dialects of Tamil. Also, for more detail see Zvelebil (1969:357 ff).

³. For a contrastive study of Indian Tamil and Sri Lanka Tamil see Suseendirarajah (1973b, 1975). *Sri Lanka Tamil* is also argued to be Sri Lankan in origin with no close relationship with Indian Tamil. For details see Thananjayarajasingham (1972b:5. fn. 2)

⁴. Tamil is spoken by Sri Lankan Moors as well.

employ the term *Sri Lanka Tamil* or *Ceylon Tamil* to refer particularly to the northern dialect or *Jaffna Tamil*.

Kailasapathy & Sanmugadas (1976), meanwhile identify six Tamil dialects in Sri Lanka, namely:

2. a The Northern dialect or Jaffna Tamil;
- b The Northeastern dialect spoken in the Trincomalee district;
- c The Northwestern dialect spoken in the Chillow district;
- d The Southeastern dialect spoken in the Batticaloa district;
- e The Moor dialect; and,
- f The dialect spoken by Indian labourers.

When these classifications are compared, it shows that none of them is exhaustive. Zvelebil has not taken account of the Moor dialect, the Chillow dialect, and the dialect used by Indian migrants. Kailasapathy & Sanmugadas have not taken into account the mixed variety spoken in Colombo, and have misleadingly considered all Indian migrants as estate labourers. This implies that a comprehensive classification of Tamil dialects in Sri Lanka has to include seven major varieties.

3. a The Northern dialect or Jaffna Tamil;
- b The Northeastern dialect spoken in the Trincomalee district;
- c The Northwestern dialect spoken in the Chillow district;
- d The Southeastern dialect spoken in the Batticaloa district;
- e The Moor dialect;
- f A mixed variety spoken in Colombo; and
- g Estate Tamil.

In this categorization the mixed variety may consist of Tamil speakers from different linguistic and social backgrounds. Some of them are migrants from India. Others have moved from different parts of the country. Some others are Moors. Many of them are engaged in businesses or business related activities.

The Indian Tamil migrants in Sri Lanka are about 40% of the Tamil speaking population. They are of three types:⁵

4. a Estate Tamils: people who were brought to Sri Lanka by European planters to work on the tea and rubber plantations in the latter part of 19th century and the first part of 20th century;
- b Voluntary migrants: people who voluntarily emigrated to the country, not with the intention of working on a plantation, but merely seeking some kind of employment; and,
- c. Businessmen: people who belong to the Nuttukottay and Chettiyar categories, and those who are engaged in business.

This classification shows that all Indian migrants, as opposed to the implication given from 2f, are not estate labourers, but the latter are only a part of the Indian Tamil migrants. The majority of the people within these three groups taken together, however, are Estate labourers. They have remained confined to plantations in several parts of the hillsides of the country while others, I. e. voluntary migrants and businessmen, make their living over the whole island in a range of occupations. In order to differentiate the Indian Tamils who are employed in Estate plantations from the other two groups, they are called *Estate Tamils*, and their language variety is introduced as *Estate Tamil* (ET). Thus, ET must be distinguished from the Tamil dialects spoken by the other two Indian migrant groups and by the people in the Indian subcontinent, especially in south India.

1.1.2. Estate Tamil

The language variety referred to as ET has two common properties. Diachronically, ET descends from the dialects of IT as the ancestors of ET speakers are Indian migrants. Synchronically, it is spoken in tea and rubber estates. It must be noted, however, that the notion *Estate Tamil* is only a cover term parallel to *Indian Tamil* and does not mean one homogeneous dialect. In other words, *Estate Tamil* is spoken in a vast area of the hill sides in Sri Lanka. Thus, it may have some geographical differences or variation caused by historical reasons. The ET speakers themselves or their ancestors have migrated to Sri Lanka from different parts of (South) India. When these people reached the island, people from different

⁵. It seems that Kailasapathy & Sanmugadas (1976) have not taken voluntary migrants and businessmen into their accounts. This results in their accounts being incomplete. Also see Chattopadyaya (1979) and Coelho (1976) for detailed accounts on Indian Tamil migrants in Sri Lanka.

parts of Tamil Nadu with different sociolinguistic background were accommodated in the same area. This led different dialects of *Indian Tamil* to merge with one another during the last century. Since this merging and regrouping have spread throughout the hill sides of the country's several districts, there can be dialect variation within ET.

At the same time, ET as a whole differs from IT, though the former has a daughter relationship with the latter. There are several reasons for this assumption. Firstly, Estate Tamils have lived in Sri Lanka for about a century. Hence, the geographical separation between India and Sri Lanka isolates the two language varieties and keeps them distinct. This causes these two dialects to evolve independently and creates differences. Second, in tea and rubber estates, migrants from different parts of Tamil Nadu have been living together in the same area.⁶ Third, the majority of Estate Tamils live in Sinhala speaking parts of the country.⁷ Also, many Estate Tamil speakers can speak Sinhala and interact with Sinhala people. Thus, it may affect ET, and any change caused by this interaction results in differences between ET and IT. Fourth, speakers of ET have some interaction with people from Jaffna as the latter have a business relationship with those in the tea and rubber estates. More importantly, teachers from Jaffna dialect of Tamil have been appointed to the estate schools. This may cause some effect on ET. Any such new development in ET causes deviation between ET and IT.

Researchers on Tamil, however, seem not to have recognized the possible differences between ET and IT, and have assumed both varieties are identical. This view is explicitly stated by Sanmugadas (1972): "The speech of the Indian Tamils and Indian Moors [in Sri Lanka] does not in any way differ from the Indian colloquial Tamil". (p. 5)⁸ As a result,

⁶. 'Indian Tamil' is the cover term that represents varieties of Indian dialects that have phonological and grammatical differences. Christdas (1988) spells out this in her dissertation.

A. "There are, instead numerous spoken dialects based either on caste or geography, or both, and differing from one another in phonology, morphology and even syntax" (ibid. 10)

B. "...all these apparent contradictions can be explained when we realize that each account describes a particular dialect which differs from the others in certain aspects of the phonology and morphology. (ibid.13)

C. Karunakaran (1971) explains 'phonological, grammatical lexical differences of several dialects'.

⁷. Sinhala is the language used by the majority of the people in Sri Lanka.

⁸. Historical and sociolinguistic background of ET may suggest that this variety can provide interesting information for researchers of dialectology, pidgin languages, and historical linguistics.

hardly any substantial research has been carried out on ET.^{9, 10} This very fact shows the necessity and importance of studying ET. Also, it is observed, as will be explained in 1.2. that ET is not identical to IT and varies from JT as well. These observations show that ET is a good field of research. Therefore, data are gathered from ET for the morphosyntactic study presented in this dissertation. The methodology of data collection will be described in 1.3. Prior to that in the next section some peculiarities of ET are sketched.

1.2. ET vs IT and JT

This section outlines characteristics of ET, comparing it to IT and JT. The discussion mainly focuses on phonological differences, and provides some morphological and syntactic differences as well. In 1.2.1, some differences of ET and IT are sketched. When it is necessary, remarks will also be given to show how a particular phenomenon relates to JT. Subsequently, ET is compared to JT in 1.2.2. Data for these illustrations have been gathered from different sources. Data for ET are taken from the dialect spoken in Sri Lanka (See section

⁹. No research, to the best of my knowledge, has been done on ET. This is even true for many other Tamil dialects in Sri Lanka. As shown in the following list (and the references given in these works) considerable amount of research has been carried out only on the Jaffna dialect of Tamil.

Gair, J.W., S. Suseendrarajah, W.S.	
Karunatilleke	1978 Jaffna Tamil
Gair, J.W. & S. Suseendrarajah	1981 Jaffna Tamil
Karunatilleke, W.S.	1973 Jaffna Tamil
Sanmugadas, A.	1972 Jaffna Tamil
Suseendrarajah, S	1967 Jaffna Tamil
--Do--	1970 Jaffna Tamil
--Do--	1973a Batticaloa Tamil
--Do--	1973b Jaffna Tamil
--Do--	1975 Jaffna Tamil
--Do--	1987 Jaffna Tamil
Thananjayarajasingham, S.	1972a Jaffna Tamil
--Do--	1972b Jaffna Tamil

¹⁰. The few, available books on Indian Tamil spoken in Sri Lanka are meant for teaching Tamil to expatriates who were engaged in tea and rubber estates. Joseph Munshi (1872), for instance, explains in the preface his aims of compiling a Tamil book. "The present work is compiled to meet a growing demand from planters, merchants, and others, for a short guide to the easy acquisition of the Tamil language, facilitating their intercourse with the natives". The title of W.G.B. Wells' text 'Cooly Tamil' (1927) itself reveals its purpose. A further description comes on the front page of this book according to which 'Cooly Tamil' is thought here "as understood by labourers on tea & rubber estates. Specially, arranged for planters and planting students". These texts represent a colloquial style of Indian Tamil at that time, rather than a new dialect, i.e. Estate Tamil. Hence, they can be a good source for a comparative study of Indian Tamil and Estate Tamil.

3), and data for IT are collected from Asher (1982), Christdas (1988), and Balasubramanian (1972). JT is presented as described in Gair, Suseendirarajah, and Karunatilleke (1978).

1.2.1. IT vs. ET

1.2.1.1. Phonological differences¹¹

The number of vowels in IT and ET is more or less the same. The quality of each of these vowels, however, changes from dialect to dialect. Therefore, it is very difficult to compare these different sets of vowels partly because there is not harmony in phonological presentations among various texts and partly because it is impossible to find substantial phonological accounts of all Tamil dialects spoken in (South) India. Hence, vowel systems are not compared in this brief discussion.

Out of the consonants, voiced stops, namely /b/ /d/ /D/ /j/ /g/ are phonemes in IT, but not in ET. In the latter, they occur optionally in place of voiceless stops in loan words. e.g.

5.	IT ¹²	ET	gloss
	bayam (A)	payam	fear
	darmam (A)	tarmam ~ darmam	doctrine
	DaakTaru (A)	TakkaTru ~ DakkaTru	doctor
	tange (B)	tanke	younger sister
	graamam (A)	kraamam	village
	roojaa (A)	roocaa	rose

¹¹. For the sake of consistency and convenience, the data taken from the various texts have been transcribed in this chapter using characters which differ from those of the original examples. The following changes are noteworthy.

D	= Voice retroflex stop
j	= Voiced palatal fricative
T	= Voiceless retroflex stop
š	= Voiceless apico-palatal fricative
c	= Voiceless lamino-palatal affricate

In ET T is pronounced as D preceeding *ŋ* or intervocally, and *nc* cluster is pronounced as *nj*.

¹². The letter in brackets at the end of the examples from Indian Tamil refers to A(sher), B(alasubramanian) and C(hristdas) where these data are found.

Second, fricatives such as /z/ /ʒ/ /h/ /f/ that occur in IT are not found in ET. /s/ in the former is only an allophone of /c/ in the latter. /ʃ/ is used in a few loan words in ET as an optional variant of [s]. e.g.

6.	IT	ET	gloss
	hindi~indi (A)	indi	Hindi
	šaappu (A)	caappu	shop
	zuu (A)	- -	zoo

Third, according to Christdas (146 ff) there are three distinctive nasals in IT.¹³

7.	1. Alveolar /n/	naay	dog
		kanam	heavy
	2. Retroflex /ɳ/	tuuɳ	pillar
		maɳiy	bell
		taɳɳiy	water
	3. Palatal /ɲ/	ɲaanam	wisdom
		ɲaayam	justice

It is noted, however, that the phonemic differences among these nasals are fading away in ET. As a result, /ɳ/ and /n/ in ET have parallel distribution.

8.	IT	ET	Gloss
	maɳam	manam	smell
	manam	manam	mind

/ɲ/ in ET occurs only in loan words or preceding /c/. Word initial /ɲ/ of IT is realized as /n/ in ET.

9.	IT	ET	Gloss
	koɳjam	koɳcam	a little
	viɳɲaanam	viɳɲaanam	science
	ɲaayam	naayam	law

¹³. Different accounts, however, can be seen in Asher (1982) and Balasubramanian (1972).

Like nasals, phonemic distinction of laterals and r-phonemes of IT seems to be disappearing from ET. As exemplified below, Christdas (ibid:158-159) identifies two different laterals and three r-phonemes for IT. Nonetheless, ET has only one lateral, /l/ and a trill /r/ in these words.¹⁴ e. g.

		IT	ET	gloss
10.	1. Alveolar /l/	kaal	kaal	leg
		laapam	laavam	gain
		talay	talay	head
	2. Retroflex /L/	poruL	porul	thing
		puLiy	puli	tamarind
	1. Alveolar /r/	rompav	rompa	much
		tayir	tayir	yoghurt
		ciriy	ciri	laugh
	2. Retroflex /ɽ/	pukaɽ	pukal	praise
		kooɽiy	kooli	hen
		vaatɽkkay	vaalkay	life
	3. Retracted /ɻ/	kaɻiy	kari	coal
		aɻay	ara	half

As a result, an informal conclusion is made that there are no phonemic distinctions within laterals, nasals and trills in ET. Thus, henceforth only /n/, /l/, and /r/ are used when data from ET is transcribed.¹⁵

Fourth, in both dialects when word-final nasals are deleted, especially in rapid speech, penultimate vowels are strongly nasalized. Nevertheless, ET does not observe this variation if a /D/ precedes the penultimate vowel. e.g.

¹⁴. Asher (1982:215-6) identifies two r-phonemes in his accounts. e.g

voiced apico-alveolar tap [ɽ]

voiced apico-alveolar trill [r]

These variations are due to dialectal differences.

¹⁵. See the appendix.

11.	IT ¹⁶	ET	gloss
	/maram/	[máro~] ¹⁷	[máro~] tree
	/veenum/	[véenu~]	[véenu~] want
	/makan/	[máxe~]	[máxe~] son
	But:		
	/kaDan/	[káDo~]	/kaTan/ [káTan] loan
	/paDam/	[páDo~]	/paTam/ [páTam] picture

Fifth, the consonant clusters found in IT are simplified in ET by inserting a vowel in between the consonants in question. The initial consonant clusters of the words of IT in 12 are separated by /u/ or /i./¹⁸

12.	IT	ET	gloss
	tvaaro~	tuvaaro~	hole
	trulaa	tiruvilaa	festival
	vyaadi	viyaati	ill(ness)

Interestingly, some consonant clusters that occur in IT are also found in rapid speech in ET as optional variants.¹⁹

13.	IT	ET	gloss
	pilaa ~ plaa	pilaa ~ plaa	jack fruit
	kiDaa ~ kDaa	kiTaa ~ kTaa	buffalo

In ET, unlike in IT, voiced, geminated consonant clusters are not found word medially, except in some loan words.²⁰ e.g.

¹⁶ These data are from Zvelebil (1970).

¹⁷ [~] indicates that the preceding vowel is nasalized.

¹⁸ The data are due to Suseendirarajah (1973b:175).

¹⁹ The data are from Zvelebil (1970:43).

²⁰ Data are from Suseendirarajah (1973b:176).

14.	IT	JT	ET	Gloss
	appaa	appaa	appaa	father
	Dabbaa	--	--	tin
	paTTu	paTTu	paTTu	silk
	saddo~	sattam	sattam	noise
	jaggu	--	(jaggu)	can

Word medial consonant clusters in IT are also simplified in ET by adding a vowel between the consonants.

15.	IT	ET	gloss
	upmaa	uppumaa	a kind of food

It is also observed that many consonant clusters such as -pm- -pl- -np- -nr- -rr- -lb- -žv- that are found in IT do not appear in ET.²¹ Further, ET, as against IT, has only a few consonant clusters with three members.

In addition to these, some variations in the lexical representations occur due to the phonemic differences of these two dialects. At first glance, these differences seem to be regular, but a close look at them reveal that there are many exceptions, and hence formulating a general rule is rather difficult. It is also noteworthy that a form of IT which is not found in one dialect may occur in another one. Thus, ET forms that are compared to IT may not occur in some dialects of IT, but can appear in other dialects. This makes exhaustive comparison of ET to IT difficult. In other words, one may find similarities of word forms in ET and the dialects of IT since ET has evolved from various dialects of IT. e.g.

²¹. For more detail see Suseendirajah (1973b).

16.	IT	ET	Gloss
a-e	ratta~	retta~	blood
o-a	eppo	eppa	when
a-i	kaTTaDa~	kaTTiTā~	building
--	illaaTTi	illaaTTi	if not
u-e	purali	perali	mischief
a-i	vaankane~	vaankine~	(I) bought
a-u	avanka	avunka	they
p-v	laapa~(m)	laava~(m)	profit
ŋ-n	naaya~	naaya~	method
D-TT	rooDu	rooTTu ²²	road

So far, several instances of phonological variations of ET and IT have been explained. They exemplify, contrary to the general view, that ET has peculiarities that differentiate ET from IT. This observation can be further supported by some morphological and syntactic variations.

1.2.1.2. Morphology

ET differs from IT morphologically as well. Such variations occur in case suffixes, verbal suffixes and plural suffixes. A few instances of these dissimilarities are given below.

First, in the dialects of IT /ooDa/ /uDaya/ and /kka/ appear as genitive case markers.²³ In addition to the first two of these suffixes, e.g. /ooDa/ (ooTa in ET), and /uDaya/ (uTaya in ET) ET also has /uTTu/ and /atu/ as shown in 17-21. e. g.

17. it-aan avan-atu/avan-uTTu muuttakkaa.
 this-EMP he-GEN elder sister
 This is his elder sister.

18. atu avan-uTaya koTay.
 that he-GEN umbrella
 That is his umbrella.

²² . T represents the voiced retroflex consonant and is similar to /D/ in IT. It is pronounced as a voiceless retroflex stop when it is doubled or when it accompanies /c/.

²³ . -akk occurs only in the Kanniyakumari dialect of Tamil. See Christdas (1988:286).

19. atu oo-v-uTTu veela.²⁴
 that you/OBL-v-GEN work
 That is your work.
20. onka camcaaram-v-uTTu
 you/(zero) GEN wife-v-GEN
 tankacci peer enna?
 younger/(zero) GEN sister name what
 What is your wife's younger sister's name?
21. nii ee-v-uTTu palaya veelakkaaran.
 you I/OBL-v-GEN old servant
 you are my old servant.

Second, several verb forms that do not occur in IT are found in ET. One of the instances is the second person non-polite imperative form. In IT, either a verb stem or a verb stem plus the imperative suffix *-a* appears as the non-polite imperative. Additionally, in some cases in ET, *kir* occurs in between the verb stem and *-a*.

22. vaacci-kir-a = (vaaci-cci-kir-a).
 read-SELF BENE-IMP = (read-PART-SELF BENE-IMP)
 Read ((inferior) it yourself).

If *kir* in 22 is assumed to be the equivalent of *kol* 'the benefactive marker', then, this peculiarity may be a version of *vaacicci kolla* 'read yourself', 'you may read, I don't mind'.

Third, *-iyal*, the second person polite form of JT occurs in ET too, but not in IT. This is a good example for the influence of Jaffna Tamil over ET. e.g.

²⁴. When a vowel initial morph is attached to a /i/ final word /y/ appears as a result of sandhi rule. In the same way, when a vowel initial morph is attached to a morph with a vowel other than /i/, /v/ occurs between these two elements. In the glosses, they are given as -v- and -y-.

23. niinka renTu peeru iru-kk-iyal-aa?
 you two person be-kk-2 SG/PL-Q²⁵
 Are there two of you?

An optional variant of *iyal*, e.g. *iya*, is also seen in ET.

24. (nii) cokam-aa iru-kk-ir-iy-aa?
 you well-ADV be-kk-PRES-2 SG/PL-Q
 How are you?

In ET, but not in IT, *iya(l)* is also used with the negative suffix *-aat*. This combination gives the sense of prohibiting some thing. So,

25. elut-aat-iyal(l).
 write-NEG-2 SG/PL
 Don't write.

Imperative form *iya(l)* is used in the conversations with close friends, equals or in addressing or giving orders to inferiors.

Fourth, the permissive suffix is another case of interest. In the first person singular ET has *TTaa*, i.e. the permissive suffix *TT* plus interrogative suffix *aa*, instead of *TTumaa* in IT and *TTe* in JT. A glance at these suffixes shows that the ET form is closer to the JT form than that of IT. This can be another instance where JT has affected ET.

26. naan var-a-TT-aa.
 I come/OBL-INFN-PERMISS-Q
 May I come!

Fifth, some IT dialects have plural markers *-kε*, *-gε*, *-o*, *-uo* word finally, and *-kaL*, *-kL*, *-gaL*, *uol* word medially. None of these suffixes appear in ET. Thus, the plural, pronouns given in 27 are not found in ET.

²⁵ . The verbs that have been classified as strong verbs in the traditional grammars receive *-k* or *-kk* prior to the attachment of the present tense markers or several other suffixes. This sequence of consonants is semantically empty. Therefore, I gloss them as *-k* or *-kk*.

27.	Third person masculine	avanuo	they (those people)
		avanugε	they
		ivanuo	these (people)
		ivanugε	these
	Third person feminine	avaluo	they
		avalugε	they
		ivaluo	these
		ivalugε	these
	Non-human	atuo	they (Those things, animals)
		atugε	they
		ituo	these (things or animals)

Some phonological and morphological differences between ET and IT have been illustrated so far. It is natural, then, to assume variation in syntax as well. This issue is briefly addressed next.

1.2.1.3. Syntax

This section provides one syntactic difference between ET and IT. This is associated with the case assigning properties of verbs whereby the same verbs assign different cases in IT and ET. For example,

28. IT. en-naale peec-a muTi-y-um.
 I/OBL-INSTR speak-INFN can-y-FN
 I can speak.
- ET. en-akku peec-a muTi-y-um.
 I/OBL-DAT speak-INFN can-y-FN
 I can speak.

29. IT. niinkal poo-k-a-laam.
 you/NOM go-k-can/FN²⁶
 You can go.
- ET. onkal-ukku poo-k-a-laam.
 you/OBL-DAT go-k-INFN-can/FN
 You can go.
30. IT. avar-ay var-a-c coll-unka.
 he-ACC come/OBL-INFN say-IMP
 Tell him to come.
- ET. avar-ay/avar-ukku var-a-c collu-nka.
 he-ACC/he-DAT come/OBL-INFN-c say-IMP
 Tell him to come

muTi in 28 has a subject noun inflected for instrumental case in IT whereas the same verb has a dative marked subject in ET. The verbal form *pookalaam* in 29 has a nominative subject in IT, but it has a dative marked subject noun in ET. The subject nouns of the embedded clauses of the sentences in 30 have different case markers. In IT, *avar* is marked accusative whereas in ET the counterpart noun appears with either accusative or dative case suffixes.

To summarize, this section has illustrated differences between ET and IT. IT has voiced consonant phonemes, but ET does not have them, except in a few borrowed words. The former has phonemically distinctive three nasals, two laterals, and three trills. In the latter, they have assimilated and hence, only one phoneme occurs in each category. Because of these variations lexical representations of these two dialects also differ. In addition to these, consonant clusters of these varieties show dissimilarities. In ET, consonant clusters with three members are not found. In many cases, consonant clusters of IT have been simplified in ET by inserting a vowel between the consonants. ET and IT have different morphological and syntactic properties as well. They occur in case suffixes and verbal inflections.

This evidence reveals that ET is not identical to IT, as assumed by some researchers. This identification shows the necessity and importance of studying ET as an independent dialect of Tamil.

It has been mentioned in 1.1. that Indian Tamil differs from *Sri Lankan Tamil* or *Jaffna Tamil*. This implies that ET, even under the assumption that ET is similar to IT, also

²⁶. The verbs that have been classified as strong verbs in the traditional grammars receive semantically empty *k* or *kk* prior to the attachment of the present tense markers. This sequence of consonants is semantically empty. Therefore, I gloss them as *-k* or *-kk*.

deviates from JT. This assumption is not controversial and hence needs little explanation. However, a brief discussion on different characters of ET and JT is given next to show the nature of the differences between these dialects.

1.2.2. ET vs JT

This section is primarily devoted to present some phonological differences between ET and JT. One example of morphological variation is presented merely to indicate possible distinctive morphological variations.

1.2.2.1. Phonological differences

The number and quality of the vowels in ET and JT vary considerably though that of the consonants are equal. JT has sixteen vowel contrasts as opposed to ten vowel contrasts in ET. This implies that some vowels which occur in JT do not have phonemic value in ET. Thus, several vowels in ET may correspond to one vowel in JT. They are summarized in table 31.²⁷ /o, oo, a, aa/ are identical in both dialects and are not listed in this chart. [ə] and [əə] in ET, unlike in JT, are found only in borrowed words. Therefore, they are not listed in 31.

31.	JT		ET	
	short	long	short	long
1.	i	ii	i	ii
2.	e	ee	e	ee
3.	ε	εε	a	aa
4.	ɪ	--	u / e	--
5.	ɪ	--	--	ii
6.	ə	əə	e	ee
7.	u	uu	u	uu

Some differences of phonemic representations parallel to the variation of phonemes given in 31 are exemplified in 32.

²⁷. It must be noted, however, that allophones of the corresponding vowels given in 31 may differ significantly. They are not discussed here since it is not directly related to the matter at hand.

32.	JT-ET	JT	ET	gloss
	ε - a	cantε	canta	market
	εε - aa	oonεε	oonaa	wolf
	ɪ - u	pɪllε	pulla	child
	ɪ - ii	cɪTTɪ	ciiTTu	pack of cards
	ə - e	cəpam	cevam	prayer
	əə - ee	təənkeε	teenkaa	coconut

Interestingly, some phonemic variations seem to be regular. In JT, for example, if /i/ or /u/ appear in the first syllable of the polysyllabic words preceding /a/ of the second syllable, then, in the same environment ET has /e/ and /o/ respectively.

33.		JT	ET	gloss
	i - e	vite	vetay	seeds
	u - o	mutale	motala	crocodile

Other phonemic variations, unlike that in 33, are not easy to formulate as a rule. Therefore, they have to be considered as peculiarities confined to one or several forms.

e.g.

34.	JT - ET	JT	ET	gloss
	i - u	pincɪ	puncukkaay	unripe fruit
	u - i	puLLɪ ²⁸	pillu	grass
	u - e	cuvɛr	cevaru	wall
	a - aa	appam	aappam	a kind of food
	ɪ - e	ɪlɛni	elani	young coconut
	ɪ - i	muuncɪ	muunci	face
	ε - e	natte	natte	snail
	ɪ - i	naalekkɪ	naalaykki	tomorrow

It was mentioned previously that the number and the quality of consonants are similar in JT and ET. Nevertheless, in some cases, word forms differ as different consonants occur in the same context. A few instances of them are given in 35-37.

/v/ occurs inter vocally in ET whereas /p/ appears in the same context in JT.

²⁸. /L/ is the retroflex lateral.

35.		JT	ET	gloss
	p - v	paapam	paavam	sin

Word medially, /k/ precedes a short vowel in ET, but in this environment in JT /v/ is seen.

36.		JT	ET	gloss
	v - k	cəvɪTɪ	cekuTu	deft

Further, there are some differences which are restricted only to the given elements in 37.

37.		JT	ET	gloss
	k - y	cineekitam	cineeyitam	friend
	t - c	vayatu	vayacu	age
	kt - tt	pakti	patti	faith
	tt - ct	puttakam	puctakam	book
	ɳT - n	onTɪ	onnu	one
	np - mp	panpɪ	pampu	nature
	RR - tt	paRRi	patti	about

Several instances of phonological variations between JT and ET have been illustrated. As far as vowel systems are concerned, they show that different vowels occur in the same context since the number and quality of vowels in these two forms of Tamil vary. This observation can also be generalized to include the consonants of both dialects. Thus, the same word may have slightly different forms in ET and IT. Before concluding this section a note on morphological differences is given in the next section.

1.2.2.2. Morphology

The morphological differences between JT and ET include variations of pronouns and inflectional suffixes. Two instances of them are noted below.

First, ET, like IT, includes only two different demonstrative pronouns whereas in JT there are three.

38.	JT	ET	gloss
	atu	atu	that
	itu	itu	this
	utu	--	thing which is close to addressee

Second, case suffixes of ET, unlike those of JT, can be omitted optionally. The NPs in 39b-43b exemplify this variation of suffixes. e.g.

39. a. maamaa-v-ay paa-kk-a
 uncle-v-ACC see-kk-INFN
 To visit uncle
 b. maamaa-0 paa-kk-a
 uncle-0 see-kk-INFN
 To visit uncle

40. a. meecay-kku meela
 table-DAT on
 On the table
 b. meeca-0 meela
 table-0 on
 on the table

41. a. en-ray makan
 I/OBL-GEN son
 my son
 b. en makan
 I/OBL son
 my son

42. a. mani-y-iTTay
 mani-y-ABL
 from Mani
 b. mani-0 kiTTa
 mani-0 near
 from Mani

43. a. en-n-ooTa
I/OBL-n-SOCI
with me
- b. en-kuuTa
I/OBL-SOCI
with me

In 39a-43a, examples from JT have overt case markers in all their occurrences whereas those in 39b-43b may or may not have case suffixes. In 39b-41b, ET has only oblique forms without case suffixes, and in 42b-43b ET has different post positions.

These sketchy remarks on ET and JT reveal that they represent two different dialects of Tamil.

To summarize, Estate Tamil has been, explicitly or implicitly, assumed for decades to be identical to Indian Tamil. This supposition was questioned in this chapter, comparing ET to Indian Tamil and the Jaffna dialect of Tamil. As a result, ET was recognized as an independent dialect of Tamil, contrary to the assumption made by researchers on Tamil. Thus, Data are drawn from ET for the morphosyntactic study of Tamil presented in this dissertation.

1.3. Data

A variety of ET spoken in Haputale and Diyatalawa areas in Badulla district, Sri Lanka will be analyzed in his dissertation. Gathering of data was necessitated by the fact that the writer of this dissertation is not a native speaker of Tamil. He only has acquaintance of the language and the native speakers.

The data are collected from the native speakers of a variety of age groups. The first set of data was collected in 1987 with the help of the late Mr. Ana Singaravelu, (65) Diyatalawa.²⁹ Singaravelu was born at Diyatalawa, and had been working in Hapugahawatta tea plantation, Diyatalawa, from his youth until his retirement. These data were checked with Balakrishnan (30, Diyatalawa), K. Velayutham (36, Haputale), K. Velan (65, Kelburne, Haputale), P. Kandaiya (80, Galkanda, Haputale), V. A. Ramaiya (74, Totulagala). This set of data consisted of a list of words and a few conversations and was used for the writers M. A. dissertation, Nagita (1988). In July 1990, the second set of data was collected from the conversations and talks on different subjects such as religion, politics, stories and so on. The

²⁹ . In this section, names of my language consultants are given together with their age, the tea plantation and/or the town where they live in.

participants of these conversations include S. Tangavel (48, Dambetenna, Haputale), P. Sinnayya (67, Sherwood, Haputale), S. Karumalai (62, Dambetenna, Haputale), K. Sellammah (58, Haputale), C. Shanmugam (60, Blackwood, Haputale), S. K. Souvunder (38, Blackwood, Haputale), M. Velan (65, Kelburn, Haputale), P. Sinnaiya (67, Sherwood, Haputale), K. A. Selliah (55, Dambethenna). All these data were recorded and were transcribed.

During the analysis of these data, a lot of gaps were found. These problems were discussed with Velayutham. Some data were rechecked with the help of Velayutham and a few others named below. Also, more data were gathered spending more than one month during the months of November and December 1992. Participants in these discussions include K. Velayutham, K. A. Sellayya (55, Dambetenne, Haputale), V. Muttuca:mi (62, Wiharagala, Haputale), L. Marudai (52, Totulagala, Haputale), A. Sathiyaseelan (36, Haputale), and K. Punitharaja (28, Haputale).

This collection of data consists of fourteen C90 tapes, several questionaaire and explanatory notes. These data provide substantial material for thorough analyses of many aspects of ET. In this dissertation, I use these data to examine only morphosyntactic behaviour of verbal and nominal morphology.

To conclude, some of the sociolinguistic factors and several peculiarities of ET have been outlined in this chapter. ET was compared to IT and JT to show that ET is a distinctive variety of Tamil that differs from other dialects of the language. Consequently, I claimed that the general assumption that ET is equivalent to IT is inaccurate. The discussion in this chapter has also indicated that ET is a good source for research in dialectology, pidgin languages, and historical linguistics. Having described sociolinguistic issues related to ET, I move next to study the morphosyntax of Tamil in the rest of this dissertation. Thus, the next chapter describes data and shows how these data are related to the morphological theory.

Chapter 2

Morphological theory and Tamil

2.0. Introduction

In chapter 1, I introduced ET as a distinct dialect of Tamil. Accordingly, this chapter proceeds to discuss the deverbal nominals in Tamil and the problems which they may raise to the theory of morphology. First, in section 2.1, I present data which are crucial to the present study. In section 2.2, the problems concerning the definition of *word* are sketched, though defining *word* is not a primary goal of the present work. This discussion is useful since the critique of the criteria given in this section will be employed in 8.3 to illustrate the advantages of the approach assumed in this dissertation. As a background to the discussion on the problems related to the domain of morphology the historical development of generative morphology is outlined in section 2.3. Section 2.3.2.1, then, discusses how deverbal nominals are problematic for the Lexicalist Hypothesis. Subsequently, two syntactic approaches to morphology are outlined in 2.3.3 to show that some problems related to morphology can be easily resolved in a syntactic framework.

The history of morphology and the problems associated with the deverbal nouns in Tamil indicate that the controversy over the domain of morphology has its roots on the dichotomy between inflections and derivations. Therefore, section 2.4 examines the distinction between inflections and derivations. This critique shows that differentiating inflections from derivations is rather problematic since their properties are not completely distinctive. However, some researchers attempt to maintain the distinction between these two types of morphology through two kinds of rules, namely, the lexical rules and syntactic rules. Thus, section 2.5 describes the characteristics of these rules, and points out that these rules are not as distinguishable as it may seem at first glance. This indicates that assuming two types of rules to characterize inflections and derivations is not satisfactory either. Therefore, I dispense with the traditional distinction between

inflections and derivations, and propose to treat all regular, productive suffixes in the syntax. Section 2.6 sketches the notion productivity, another issue which has been constantly discussed in morphological theories. It will be shown that productivity does not play a significant role in the grammar when rule distinction is eliminated.

2.1. Nominal and verbal morphology in Tamil

Tamil is a morphologically rich language with unmarked SOV word order. Nouns in Tamil are conjugated for case, and verbs are inflected for tense and agreement. Inflected verbs may consist of verb stems, tense and agreement suffixes, and conjugated nouns may contain noun stems and case markers.¹ The noun phrase in 1, for example, has a noun stem followed by respectively, the polite marker, number and case suffixes. The verbal form in 2 contains a verb stem that precedes tense and agreement suffixes.

1. *tampi-maar-kal-ukku*
 brother-POLITE-PL-DAT
 To the brothers,

2. *(naan) poo-r-een.*
 (I) go-PRES-1/SG
 I am going. (lit. I go)

Due to the richness of morphology, almost all major lexical categories can be derived by suffixing verbs or nouns. Thus, derived nouns, adjectives and adverbs also have complex morphological structures.²

Adjectives and adverbs are derived by suffixing nouns. e.g.

- | | | | |
|----|--------------------|---|-------------------|
| 3. | <i>veekam-aana</i> | > | <i>veekamaana</i> |
| | speed-ADJ | | Fast |

¹. These verbal and nominal forms can also attach to some other morphemes. Nouns accompany *aavatu* 'even', *aaka* 'for', *um* 'also, even', among others, and verbs may precede interrogative *aa* and dubitative *oo*.

². Derived verbs do not exist in Tamil. One can argue that there are derived verbs such as causatives and paired verbs. However, they are treated as single lexical elements and are put in the lexicon since they are not productive in modern Tamil. See Asher (1982:202) for a similar observation.

- | | | | |
|----|-----------|---|----------|
| 4. | veekam-aa | > | veekamaa |
| | speed-ADV | | Fast |

Derived nouns are of two types:

5. a. Complex nouns
- b. Deverbal nouns

Complex nouns are formed by suffixing nouns.

- | | | | |
|-------|--------------|---|-------------|
| 6. a. | niiti-maan | > | niitimaan |
| | law-NOML | | lawyer |
| b. | kuuli-kaaran | > | kuulikaaran |
| | wage-NOML | | Coolie |

Deverbal nouns have a rather complex morphological structure. Thus, they are described in detail as the main objective of this dissertation is to analyze morphosyntactic properties of these nouns.

2.1.1. The deverbal nouns in Tamil: an overview

Descriptive studies of Tamil have recognized three types of deverbal nouns.³ Some of them, namely, those in 7 below, are assumed to have been formed by adding nominalizers to verb stems. Those in 8 are generated by suffixing *-atu* to the tensed forms of verbs. The third type of noun is derived by attaching one of the four pronominal suffixes, e.g. *-van*, *-val*, *-var*, and *-tu* to the adjectival participle form of a verb.

- | | |
|----|-------------|
| 7. | paTi-pu |
| | study-VNOML |
| | Study |

³. I introduce nominalizers in these three types of nouns as Verbal Nominals (VNOML), Gerundive Nominals (GNOML) and Participial Nominals (PNOML).

8. paTi-kk-ir-atu
 study-kk-PRES-GNOML
 Studying

9. paTi-kk-ir-a-van
 study-kk-PRES-ADJ-PNOML
 The one who studies

Scholars have classified and/or defined these derived nominals based on different criteria. Paramasivam (1972) has cited nineteen derivational suffixes from the Commentary on Nannul by Arumuganavalar, and argues that only *-(t)al* can be considered to be the verbal noun.⁴ He differentiates nouns derived by adding *-tal* to a verb stem from the rest of the derived nouns. They are respectively called verbal nouns and simple nouns. He further observes that in modern Tamil *-tal* nominals have been substituted by the *-atu* type (8 above) nominals. Thus, according to Paramasivam, there are three types of derived nouns in literary Tamil: the simple nouns (7 above), the verbal nouns (8 above), and the participial nouns (9 above).

Interestingly, in the introduction of Annamalai (1972) it is illustrated how vaguely the same structure has been introduced under different names. For instance, *varaataatu* in 10 is characterized as a verbal noun by Arden (1942:228) and Agesthialingom (1967:137) whereas it is identified as a participial noun by Andronov (1959).

10. avan inkee var-aat-atu nalla-tu.⁵
 he here come/OBL-NEG-GNOML good-3/SG/NEUTER/PRO
 It is good that he did not come here.

Annamalai considers the noun in 8 as a PN and the one in 9 above, e.g. *koTu-tt-atu*, the

4. The verbal noun suffixes, as cited by Paramasivam (ibid), are *-tal*, *-al*, *-am*, *-ai*, *-kai*, *-vai*, *-ku*, *-pu*, *-u*, *-ti*, *-ci*, *-vi*, *-ul*, *-kaaTu*, *-paaTu*, *aravu*, *-aamai*, *-mai*, *-tu*. I find the following suffixes in ET: *-al*, *-am*, *-ay*, *-kay*, *-vay*, *-pu*, *-ti*, *-vi*, *-may*, *-(zero)*, *-vu*, *-i*, *-cc*.

5. Glosses were not given in Annamalai's paper. To be consistent with the rest of the examples, I have used geminated vowels to indicate long vowels and hyphen to separate different morphemes in this sentence.

third person, neuter, singular verbal form, as a verbal noun.⁶

Thananjayarajasingham (1972a) recognizes only two kinds of nominals: verbal nouns (those in 7 & 8 above) and participial nouns (those in 9 above). Gair et. al. (1978:164) describe two types of deverbal nominals, namely, participial nouns (9 above) and action verbal nouns (8 above). Lehmann (1989:76-80) describes three kinds of derived nouns: verbal nouns, participial nouns and adjectival nouns. The verbal nouns are of two types: those in the first group take nominalization suffixes such as *-al*, *-(t)tal*, *-(k)kai* (the nouns in 7 above), and those in the second group consist of verb stems, tense or negative suffixes and the nominalization suffix *-atu* (those in 8 above). The participial nouns are formed by adding the third person remote, demonstrative, pronouns, e.g. *avar*, *avan*, *-atu*, *avarkal*, *avai*, to the tense or negative suffixes preceded by a verb stem. e.g.

11. *cey-t-avan*
 do-PAST-3 remote demonstrative pronoun
 The one who did
12. *cey-kir-avan*
 do-PRES-3 remote demonstrative pronoun
 The one who does
13. *cey-p-avan*
 do-FUTURE-3 remote demonstrative pronoun
 The one who will do

The adjectival nouns are derived by adding the third person pronoun suffixes, e.g. *-van*, *-var*, and *-val*, to the adjectival form of a verb.

14. *nalla-van*
 good-3 pronominal suffix
 The one who is good

Lehmann's classification of derived nouns is questionable on several grounds. First, Lehmann categorizes two types of derived nouns, e.g. those in 7 and 8 above, as one

⁶ Annamalai analyzes PNs assuming "they are nominal sentences whose predicates are noun phrases and whose subjects are nouns preceded by the adjectival clause". See Annamalai (ibid:102 ff).

group. This classification takes into account the fact that these nouns have a verb stem as their input, but it disregards the different syntactic behaviour of these two types of nouns. For example, the input verbs in 'untensed' derived nouns, i.e. those in 7 above, do not project their syntactic properties into syntax, but those in 'tensed' derived nouns, i.e. those in 8 and 9 above, do.

Second, if Lehmann considers a noun with an input verb as a verbal noun, one may inquire as to his reasons for not treating the participial nouns, in examples 9 and 11-13 which have input verbs, as verbal nouns in his classification.

Third, Lehmann analyzes participial nouns as 'consisting of the verb stem+tense suffix or negative suffix + a third person remote demonstrative pronoun as bound form'. However, this analysis does not provide a basis for considering these nouns as participial nouns because they do not contain (verbal or adjectival) participles in them. According to Lehmann, 'verbal participles are formed by adding the verbal participle suffix, which is homophonous with the different past tense allomorphs'. The Participial nouns in Lehmann's account cannot be the result of adding pronominal suffixes to verbal participles since they (i.e. participial nouns) can also have present and future tense suffixes, as seen in examples 12 and 13. Adjectival participles, as given in Lehmann (ibid: 75), are generated by adding the adjectival suffix *-a* to a tensed verb stem. If this segmentation is correct, then, examples 11-13 show that the formula for participial nouns given in Lehmann's account does not contain adjectival participles - e.g. a verb stem-a tense suffix (or the negative suffix)-the adjectival suffix - *a* as well. Thus, Lehmann's analysis of the participial nouns is contradictory and rather confusing.

Fourth, if the third person, remote, demonstrative pronouns are assumed to be attached to tensed forms of verbs to generate participial nouns, one may wonder as to the reasons for the unavailability of the third person proximate demonstrative pronouns such as *ivan* 'this person', *ivar* 'this person (polite)', *itu* 'this thing', *ivarkal* 'these people', *ivai* 'these things' in the same context. e.g.

15. * cey-t-ivan
 do-PAST-3 proximate demonstrative pronoun
 This one who did (it)

16. * cey-kir-ivan
 do-PRES-3 proximate demonstrative pronoun
 This one who does (it)

These problems indicate that Lehmann's analysis of participial nouns is not accurate. Alternatively, the participial nouns can be considered to have been generated by attaching pronominal suffixes, e.g. *-van* (third person singular masculine), *-var* (third person singular masculine honorific/polite), *-val* (third person singular feminine), *-tu* (third person singular neuter), and *-vunka* (third person plural) to adjectival participles. Thus,

17. cey-t-a-van
 do-PAST-ADJ-PNOML/3 SG MAS/
 The one who did (it).

18. cey-kir-a-van
 do-PRES-ADJ-PNOML/3 SG MAS/
 The one who does (it).

Accordingly, in the present work - based on the semantic and morphosyntactic properties, that will be explained in 2.1.1.1-2.1.1.3 and in chapter 7, and in accordance with the classifications of Paramasivam (1972) and Gair et. al. (1978) - I classify deverbal nominals in Tamil into three groups.

19. 1. The verbal nouns (VN)⁷
 2. The gerundive nouns (GN)
 3. The participial nouns (PN)

These three types of deverbal nominals are described briefly in the next section.

2.1.1.1. The verbal nouns

Verbal nouns (VN) that are similar to the derived nouns in English, described in Chomsky (1970), consist of a verb stem and one of the nominalizing suffixes such as *-pu*, *-am*, *-al*,

⁷ The notion verbal noun has only a descriptive value here as the nouns referred to by this name are considered to be lexical elements similar to other simple nouns and are put in the lexicon. They are also not referred to as action verbal nouns because all nouns in this group do not imply action, as seen in 35b below. Thus, they are not characterized as derived nouns, despite the fact that they seem to have two morphemes, a verb stem and a nominalizer.

-*kay*, -*ay*, -*vu*, -*ve* (*vay*), -*vi*, -*ti*, -*i*, -*cc*, -*may*, *zero*. Some of them are exemplified in 20-32.

-pu			
20.	uTu-pu wear-VNOML	>	uTuppu clothe
21.	ciri-pu laugh-VNOML	>	cirippu laughter
Zero suffix			
22.	katay-0 speak-(zero)	>	katay story
23.	aTi- 0 hit-(zero)	>	aTi blow
-am			
24.	aaTu-am dance-VNOML	>	aaTTam dance
25.	ooTu-am run-VNOML	>	ooTTam race
-al			
26.	camay-al cook-VNOML	>	camayal cooking
27.	irumu-al cough-VNOML	>	irumal cough
-vu			
28.	ari-vu know-VNOML	>	arivu knowledge

29.	nenay-vu memorize-VNOML	>	nenavu memory
-i			
30.	utavu-i help-VNOML	>	utavi help
-may			
31.	nelay-may stay-VNOML	>	nelamay condition
32.	mulu-may be whole-VNOML	>	mulumay entireness

VNs have a variety of meanings such as a state of affairs, an instrument which is used to perform an action, a result, among others. e.g.

33. -pu				
a.	paTi + pu study + VNOML	>	paTippu study	state
b.	ciri + pu smile + VNOML	>	cirippu smile	result
c.	uTu + pu dress + VNOML	>	uTuppu clothe	instrument
34. -am				
a.	varuttu + am pain + VNOML	>	varuttam pain	state
b.	virumpu + am like + VNOML	>	viruppam liking/willing	state
c.	vananku + am worship + VNOML	>	vanakkam greetings	result
35. -al				
a.	karu + al darken + VNOML	>	karuval darkness, black	state

b.	paaTu + al sing + VNOML	>	paaTal singing/song	act/result
c.	pori + al fry + VNOML	>	poriyal fried material	result

poriyal in 35c implies 'the thing that is fried', the result of frying. In this regard, the VNs, such as *cirippu*, *vanakkam*, *poriyal*, are similar to the perfect nominals in Vendler (1970 (cited in Koptjevskaya-Tamm 1988), to the result nominals discussed in Lebeaux (1986) and to the simple event nominals in Grimshaw (1990). For example, in 36 and 37, the derived nouns *examination* and *expression* indicate physical entities rather than actions.

36. John's examination was long.⁸

37. The expression is desirable.

poriyal always has the result reading like *examination* in 36 or *expression* in 37. Nevertheless, *paaTal* seems to have both the result and process readings, since it is interpretable as *song* (the result) and *singing* (process). This exemplifies that even a single suffix, in this case *-al*, conveys different meanings and that the suffixes of VNs have unpredictable, noncompositional, idiosyncratic meanings.

Another interesting characteristic of these suffixes is that they are very selective. Thus, a suffix that accompanies one set of verbs rarely occur with another set of verbs. For example, *-pu* is attached to *paTi* and *ciri* whereas *-al* is suffixed to *kaa* and *tummu*. If these suffixes are inter changed or substituted by any other verbal nominal suffix, it results in unacceptability, as shown in 42-45.

38.	paTi-pu study-VNOML	>	paTippu study
39.	ciri-pu smile-VNOML	>	cirippu smile
40.	kaa-al guard-VNOML	>	kaaval guard

⁸. These examples are from Grimshaw (1990:48, 50).

41.	tummu-al sneeze-VNOML	>	tummal sneeze	
42.	paTi-al	>	*paTiyal	(cf. 38)
43.	ciri-al	>	*ciryal	(cf. 39)
44.	kaa-pu	>	*kaappu ⁹	(cf. 40)
45.	tummu-pu	>	*tummuppu	(cf. 41)

A comparison of examples 38-41 to those in 42-45 shows that the occurrences of the VN suffixes are idiosyncratic.

There are, however, rare instances where a particular verb stem attaches to more than one suffix. Even in such cases, peculiarity prevails. *-pu* in 46 and 47 can be replaced by *-al* and *maanam*, but not by any other suffixes such as *-am*, *-vi*, or *-vu*, as given in 48 and 49.

46 a.	karu-pu dark-VNOML	>	karuppu black	
b.	karu-al dark-v-VNOML	>	karuval dark	
47 a.	tiir-pu decide-VNOML	>	tiirppu judgement	
b.	tiir-maanam decide-VNOML	>	tiirmaanam proposal/suggestion	
48.	karu-ve (vay) black-VNOML	>	*karuve (karuvay) ?	
49.	tiir-am decide-VNOML	>	*tiiram ?	

⁹. This is unacceptable with the meaning equal to *kaaval* 'guard'.

These examples indicate that the suffixes of VNs have severe restrictions concerning the verb stem to which they can be attached.

This behaviour of VN suffixes thus indicates that these nouns are idiosyncratic syntactically as well as semantically. These properties will be discussed in section 7.4.1 comparing them to those of GNs and PNs. So, next I describe the gerundive and participial nouns.

2.1.1.2. The gerundive nouns

In Tamil, GNs are formed by adding *-atu* either to a tense suffix or to the negative suffix *-aat* that follows a verb stem. Example 8, repeated here as 50, is an instance of *-atu* being attached to the (present) tense marker. In 51, a past tense suffix precedes the GN suffix. In 52, the nominalizer follows the negative suffix *-aat*, the syncretized form of the negative and tense morphemes.¹⁰

50. paTi-kk-ir-atu
 study-kk-PRES-GNOML
 The fact that X studies (Y) (Studying)
51. paTi-cc-atu
 study-PAST-GNOML
 The fact that X studied (Y)
52. paTi-kk-aat-atu
 study-kk-NEG/TENSE-GNOML
 The fact that X did/does/will not study (Not studying)

These nouns witness that the nominalizer requires a tense morpheme to precede it. As a result, GNs in Tamil express time reference, unlike those of English.¹¹ When a GN has a tense suffix, obviously, it gives a specific time reference as in 50 which indicates

¹⁰. I will argue in chapter 5 that the negative suffix *-aat* is the syncretized form of the negative and tense morphemes.

¹¹. Di Sciullo & Williams (1987:50) observe that the GNs in English do not have time reference. GNs in Tamil differ from those in English in this respect though they share several common properties.

present time. Nevertheless, when the nominalizer follows the negative suffix, the time reference of the GN in question is either past or present depending on the context. Even if the main verb of the sentence 53 is in future, the GN with the negative suffix can be interpreted for past and non-past tenses.

53. avaru vakupp-ila
 he class-LOC
 paTi-cci-koTu-kk-aat-att-ukku
 study-PART-VM/give-kk-NEG/TENSE-GNOML/OBL-DAT¹²
 etiraa pullayinka morappaaTu
 against students complain
 pann-i-T-T-aanka. (or)
 do-PART-VM/leave-PAST-3/PL (or)
 pann-i-Tu-v-aanka.
 do-PART-VM/leave-FUTURE-3/PL
 The students complained/will complain against the fact that
 he did/does/will not teach.

Examples 50-53 also show that GNs can be either affirmative or negative according to whether they include a tense suffix or the negative suffix. That is, a GN has the morpheme structure given in 54.

54. VERB STEM + (NEG)+ TENSE + -atu

Sentence 53 further exemplifies that the verbs of modalities, e.g. aspectual and (non)-attitudinal, given in 6.3.1.1 and 6.3.1.3, can also appear inside a GN. 55 provides an additional example where aspectual and attitudinal verbs appear inside the GN.

55. maankaa
 mango
 veT-Ti-koTu-ttu-paak-k-aat-att-ukku
 cut-PART-VM/give-PART-VM/see-k-NEG/TENSE-GNOML/OBL-DAT
 For the fact that X did not try by cutting mango for the benefit of Y (Lit).
 Because X did not attested Y by cutting mangos for Y

¹². VM denotes the verbs of modalities. See 6.3. for details.

GNs in Tamil cannot be pluralized. Nevertheless, in parallel to other ordinary nouns, they can appear in a sentence as many times as required, and are case marked by the verb of the main clause. In 56, GNs *kataykkiratu* 'speaking' and *peecuratu* 'conversing' represent two purpose clauses and have marked dative case inherently.

56. *inliic-ila katay-kk-ir-attu-(u)kku*
 English-LOC speak-kk-PRES-GNOML/OBL-DAT
 peec(u)-ir-attu-(u)kku paTi-kk-a-n-um.
 converse-PRES-GNOML/OBL-DAT study-kk-INFN-must-FN
 We/you have to /need to learn (how to) speak English.
57. *tooTTatt-a vit-t-atu-kku poraku*
 estate/OBL-ACC sell-PAST-GNOML-DAT after
 After the estate was sold,

In addition to the GNs described so far, there is another type of GN which is formed by attaching *-tal* to a verb stem. Therefore, following Subramanian (1988), they are introduced as *-tal* nominals. e.g.

58. *paTi-t-tal*
 study-t-tal
 studying

Apparently, the suffix *-tal*, unlike *-atu*, does not attach to a tense suffix, and indicates universal application or generic meaning with no specific time reference. Hence, *paTittal* 'studying' differs from *paTikkiratu* 'studying' as the former denotes a universal act, but the latter expresses an activity performed at the present time. The latter may also imply universal or habitual act as the present tense suffix gives universal or habitual interpretation.

These GNs are not common in modern colloquial Tamil, since they, as Paramasivam (1972) points out, have been replaced by *-atu* type GNs. Further, they have the syntactic behaviour similar to the GNs with *-atu*, though the former do not include tense suffixes. Therefore, they will not be pursued further in this study.

2.1.1.3. The participial nouns

The PNs are derived by adding either *-van*, *-var*, *-val* *-tu* and *-vunka* to the adjectival participle form of a verb.¹³ PN suffixes are pronominal in nature.¹⁴ *-var* is the third person masculine polite form. *-van* is the third person singular masculine (non-honorific) form. It has the counterpart feminine suffix *-val*. PNs with *-val* are well accepted in the standard Tamil. Yet, in ET, they are not widely used since they may indicate disrespect or casualness. *-tu*, the third person neuter pronominal suffix, indicates things, animals, children, and close female relatives, e.g. mother and sister.

59. avar caappiT-ir-a-tu maankaa.
 he eat-PRES-ADJ-PNOML/3 SG NEUTER mango
 He eats mango (lit. It is a mango what he eats.)
60. okkaa-nt-a-van okkaa-ntu kiTT-ee
 sit-PAST-ADJ-PNOML/3 SG MAS/ sit-PART SIMUL-EMP
 iru-nt-aan.
 be-PAST-1/SG
 The man who was sitting (under the tree) had been sitting (there for
 the whole night).

It will be observed in 5.4.2.1 that the adjectival suffix follows either a tense suffix or the negative suffix *-aat*. As a result, PNs can have either affirmative or negative meanings whereby the sentence 59 can have the negative counterpart given in 61.

61. avar caappiT-aat-a-tu maankaa.
 he eat-NEG/TENSE-ADJ-PNOML/3 SG NEUTER mango
 He does not eat mango (lit. It is mango what he does not eat.)

This shows that the morpheme structure of PNs have a partial similarity to that of GNs, given in 54.

¹³. The adjectival participles consist of a verb stem, a tense suffix and the adjectival suffix *-a*. See 5.4.2.1. for details on adjectival participles.

¹⁴. Because of this, PN suffixes are specified for their pronominal properties together with the glossary name PNOML.

62. VERB STEM + (NEG)+ TENSE + ADJ + -van/var/tu¹⁵

It must be noted that PNs with the present tense suffix express non-past time reference in ET. So the PN in 63 can be modified by the time adverbials *ippa* 'now', *naalaykki* 'tomorrow', as well as *eppavum* 'always'.

63. *ippa/naalaykki/eppavum/ veela cey-y-ir-a-van.*
 now/tomorrow/always work do-y-PRES-ADJ-PNOML/3 SG MAS/
 The one who (will) work(s) now/tomorrow/always

It is noteworthy that ET does not employ (or rarely use) PNs formed by attaching the nominalizers to the adjectival participles with the future tense suffix *-p*. This type of PN, e.g. PNs with the future tense suffix, occurs in literary Tamil, but not in ET, and have some constraint in formation. First, the adjectival participles with the future tense suffix can attach only to *-van*, *-val*, or *-var*, but not to *-tu*.

64. *cey-p-a-van*
 do-FUTURE-ADJ-PNOML/3 SG MAS/
 The one who will do
65. * *cey-p-a-tu*
 do-FUTURE-ADJ-PNOML/3 SG NEUTER
 The thing which will be done

Second, the adjectival participles with the future tense suffix are rather different from those that contain past and present tense suffixes. When an adjectival participle has a past or present tense suffix, it can precede the PN suffixes as well as ordinary nouns whereas if an adjectival participle includes the future tense suffix, it cannot appear before an ordinary noun.

66. *veela cey-y-ir-a aalu*
 work do-y-PRES-ADJ man
 The man who is doing/will do work

¹⁵. Lindholm (1971) (cited in Lehmann (1989:79)) also has proposed the similar structure for PNs.

67. * veela cey-p-a aalu
 work do-FUTURE-ADJ person
 The person who will work

As noted in 5.4.2.1, there is another adjectival participle, formed by attaching *-um* to verb stems. It conveys future time reference and appears prior to irrational nouns, e.g. things, animals, children, and close female relatives.

68. poo-k-um bus
 go-k-FUTURE/ADJ bus
 The bus that will go

Strangely, this type of participle does not accompany the PN suffix *-tu*, as exemplified by the unacceptability of the PN in 69.

69. * poo-k-um-tu
 go-k-FUTURE/ADJ-PNOML/3 SG NEUTER
 ? The thing that will go

One possible explanation for this behaviour is that the future tense suffix *-um* is syntactically idiosyncratic and may precede only non-human, non-rational nouns.¹⁶ The ungrammaticality of the PNs in 70-71 is due to this restriction of the future adjectival participle.

70. * cey-y-um-van
 do-y-FUTURE/ADJ-PNOML/3 SG MAS/
 The one who will do
71. * cey-y-um aalu
 do-y-FUTURE/ADJ person
 The one who will do

This section so far has provided a descriptive account of the three types of deverbal nominals in Tamil. VNs seem to have verb stems and nominal suffixes; GNs

¹⁶. Lehmann (1989:79-80) also assumes that the future tense suffix has some irregularity.

contain verb stems, negative or tense suffixes and the nominalizer; PNs include verb stems, negative or tense suffixes and the adjectival suffix inside the nominalizer. The VNs were observed to be idiosyncratic. Compared to the VNs, the GNs and PNs have concatenative morphology. That is, they have verb stems followed by a sequence of different suffixes. Each of these constituent parts add their meanings to the semantic interpretation of the GN or PN in question. In other words, the GNs and PNs are regular. They have a concatenative morphology, and compositional meanings.

2.1.2. Summary

This section has been devoted to presenting basic morphology in Tamil. In particular, I have described deverbal nominals in detail.

The data presented in this section have exemplified that Tamil is a morphologically rich language. Particularly, the description of deverbal nouns has exemplified that morphology in Tamil is rather complex. The most significant property of GNs and PNs is that they have inflectional suffixes inside derivational ones. These nouns thus provide good examples for the controversy over the domain of morphology. Further, as illustrated in 8.3, PNs (as well as aggregative nouns given in 2.2) are problematic to the hypothesized criteria, for example Bloomfield (1933), for characterizing *word*. Thus, in 2.2 and 2.3 of this chapter, I describe the history of morphology with special reference to (a) the difficulty of defining *word* and (b) the lexical and syntactic approaches to morphology. This discussion shows that theories of morphology are mainly based on the treatments given to the traditional distinction between inflections and derivations. Therefore, the second half of this chapter, that is, 2.4 and 2.5, will be devoted to exploring the properties of inflections and derivations in detail. The critique presented in these sections illustrate that the criteria proposed for distinguishing these two types of suffixes are not exhaustive. Therefore, I dispense with the traditional distinction between these (two types of) suffixes.

2.2. The Structuralist Hypothesis and defining *word*: some problems

The linguists during the Structuralist era analyzed sentences from 'top to bottom', i.e. from the clausal category to the minimum linguistic form, in order to identify basic grammatical forms. Bloomfield (1933) recognizes the simple form or morpheme as "a linguistic form which bears no partial phonetic-semantic resemblance to any other form" (p. 161). This

implies that both free and bound forms that have distinguishable phonetic and semantic items are morphemes. If a free form can occur as a single utterance, then, this *minimum free form* is characterized as a *word*.¹⁷ Further, the linguists of this school attempted to understand word structure and word formation by analyzing larger units into morphemes. This approach, however, was not always successful since many irregularities occur in word formation. Bloomfield acknowledges this difficulty and comments, "the chief difficulty lies in determining which combinations exist." (ibid. 238). Zellig S. Harris (1951) developed this morphology based analysis further. He accepts the morpheme as a basic building block of the syntax, but takes the opposite view to Bloomfield. Hence, instead of "... dividing utterances into large syntactic sections and subdividing these into a smaller morphological ones" he "begins with morphemes" and "investigates their syntactic function" (ibid. 263).¹⁸ If *newly* is analyzed, for example, Harris proposes that, "... instead of taking them ready-made, lead up to them in the course of considering sequences of morphemes: e.g. the sequence A (*new*) + *ly*" (ibid. 281). These two approaches show that from the very beginning of morphological theory, identifying linguistic units and formulating a theory of word formation have been controversial.

In addition to the difficulty with identifying linguistic units, defining them has also been a problem. For example, traditional grammarians as well as researchers from the Structuralist Hypothesis have proposed several criteria such as positional mobility, uninterruptability, one primary stress for determining *word*. These criteria have been criticized because they are not exhaustive and cannot be applied to all words. In Tamil, for instance, *ellaarum* and *ellaam* seem to be 'words'. They have one primary stress, and are written as single words. According to the criterion positional mobility, they, as shown in 73, have to be moved as a single unit when it is necessary. The sentence in 73 is acceptable, though words have been freely scrambled. The opposite is true for 74. It is unacceptable as *um*, a constituent of the lexical item has been removed from *ellar*.

17. *word* has been characterized in different ways such as orthographic word, phonological word. Di Sciullo & Williams (1987) propose morphological atom, syntactic atom and phrasal word to distinguish different types of grammatical units. For detailed accounts see Bloomfield (1933), Harris (1951), Chomsky & Halle (1968), Lyons (1968), (1977), Di Sciullo & Williams (1987), Bauer (1983), (1988), Kesarcodi-watson (1981).

18 Harris describes how morphemes can be arranged to form larger (syntactic) units. This procedure is later characterized as item and arrangement model. See Hockett (1958).

72. *ellaar-um vaa-nka.*
 all-INCL come-3/PL
 All come.
73. *vaa-nka ellaar-um*
 come-3/PL all-INCL
 All come.
74. * *ellaar vaa-nka um*
 all come-3/PL INCL

This observation indicates that *ellaarum* is one word. On the contrary, when this form is inflected for case *ellaar* and *um* are interrupted by case markers.¹⁹

75. *ellaar-ukk(u)-um*
 all-DAT-INCL
 To all

In an extreme case, a whole noun phrase may precede *um* in 76.

76. *ellaa nalla aalunkal-ukk-um*
 all good people-DAT-INCL
 To all good people

This indicates that assuming uninterruptability and positional mobility as criteria for characterizing *word* is not satisfactory. It also shows that formulating a substantial definition for *word* has been, as Skillen (1988:223) notes, 'difficult or almost impossible' as criteria proposed for determining *word* do not apply to all 'words' even within a given language.

These difficulties made researchers look for an alternative approach to morphology. As a result, at the end of the Structuralist era morphology lost its identity until it was rediscovered in the 1970's. This discovery directed research on word formation rather than defining *word* or analyzing word structure for its own sake.

¹⁹. This characteristic is not confined only to Tamil. For parallel examples from Japanese see Skillen (1988:225).

Development of the morphological theory during the post-structuralist period is briefly described next.

2.3 Development of Generative morphology

Morphology according to the Structuralist Hypothesis was a separate component of the grammar. With the emergence of transformational grammar (i.e. Chomsky (1957)) linguists gave a prominent place to phonology and syntax, and distributed morphology between phonology and syntax.²⁰ As a result, all morphophonemics were discussed in the phonology and the rest were treated in the syntax. In syntax, transformations were applied to generate compounds as well as derived words.²¹

For the first time, it was noticed in *The Sound Pattern of English (SPE)* (Chomsky & Halle, 1968) that there are "certain discrepancies" between phonology and syntax. In order to fill this gap, readjustment rules were introduced to the grammatical theory, and were employed to convert the output of syntax structure into a suitable phonological form.

The major breakthrough of morphology in the generative grammar was initiated by Chomsky's 'Remarks On Nominalization' (1970). This paper is significant in the history of morphology since it laid the foundation of research on word-formation rather than segmenting and defining *word*. Chomsky in this discussion does not formulate a theory of word formation in particular. Nevertheless, he addresses several interesting topics related to morphology, and suggests, at least, productive word formation is in the lexicon. Several aspects of Chomsky's hypothesis are outlined next because of the importance of this paper to the morphological theory in general and to the present work in particular.

20. See Aronoff (1976) and Spencer (1991), Hammond & Noonan (1988) for a short history of morphology.

21. (a) The extreme end of transformational treatment was seen in generative semantics.

(b) Lees (1960) described how compounds can be derived applying various kinds of transformations. His analysis was highly criticized because (a) the derivational process was too complex, (b) lexical deletion was the most serious theoretical problem, (c) the variability in the beginning of compounds, i.e. paraphrasing the sentence sources was ambiguous. (See Scalise (1986:8ff) for a review of Lees (1960). However, under the Standard Theory lexical items were inserted directly into the deep structure from the lexicon where the lexical entries assigned their lexical category, the inherent features and contextual features, i.e. (a) strict subcategorization (b) selectional restrictions. It must be noted, however, none of these works considered word-formation as a separate component of the grammar.

2.3.1. Remarks On Nominalization

Chomsky's main concern in 'Remarks' rested on the Nominalization patterns in English. He distinguishes gerundive nominals from derived nominals based on productivity, semantic regularity and internal structure. Syntactically, (English) gerundive nominals, but not derived nominals, can be freely derived from verbs. All derived nominals do not have corresponding well formed sentences, but gerundive nominals do. Semantically, derived nominals have idiosyncratic meanings whereas gerundive nominals have predictable meanings related to the input verbs. Chomsky observes that nominals such as *laughter, marriage* have idiosyncratic meanings and have "varied semantic relations to the base forms". Structurally, derived nominals have a structure of NP (or sometimes monomorphemic nouns) while gerundive nominals have sentence structure. Further, derived nominals deviate from gerundive nouns according to several other characteristics, given in 77.

77.	Derived Ns	Gerundive Ns
Express aspect	no	yes
Can be pluralized	yes	no
Follow determiner	yes	no
Follow modifiers:		
Adjectives	yes	no
Adverbs	no	yes
Are derived from		
transformations	no	yes

Despite these differences there are still some similarities between these two types of nominals. First, both are derived from verbs. Second, many derived nominals have possessor expressions like *Tom's giving a book to Jo* where *Tom's* is parallel to the subject of the corresponding sentence. These two characteristics of derived nominals require a proper explanation. For instance, with regard to the first issue, if derived nouns are not generated by transformational rules an adequate theory needs a way to explain the relationship between the input verbs and the derived nominals in a principled way. In relation to the second parallelism, if both derived and gerundive nominals have similar structure, then, there must be some theoretical explanation for this behaviour. In order to capture the relationship between the input and output of derived nominals, Chomsky

suggests applying lexical redundancy rules. He assumes the X-bar schemata to explain the parallelism between the subject of a verb and the possessive NP of a derived noun, and proposes that the possessive NP of a derived noun is in the specifier of NP, in parallel to the subject noun in the specifier of S-category in a syntactic tree. He, consequently, concludes that the "transformationalist hypothesis is correct for the gerundive nominals and the lexicalist hypothesis for the derived nominals and perhaps, though much less clearly for the mixed forms" (ibid. 215).

2.3.2. Development of the Lexicalist Hypothesis

Chomsky's proposal resulted in the development of the Lexicalist Hypothesis as elaborated by Halle (1973), Siegel (1979), Aronoff (1976), Allen (1978), Lieber (1981). This approach assumed, at least, some word formation is in the lexicon and proposed an autonomous component for morphology.

The new approach to morphology was also not free from controversies. One of the questions raised at the early stages of the Lexicalist Hypothesis is whether morphology is based on morphemes or on words. Halle (1973), for example, assumes that an adequate theory should specify actual as well as possible words of a language, and proposes a model where the morpheme is the basic linguistic unit.²² In contrast to this approach Aronoff (1976) assumes words as the inputs of word-formation rules, though his model is based on Halle's programme. He hypothesizes that "all regular word-formation processes are word based; a new word is formed by applying a regular rule to a single already existing word. Both the new word and the existing one are members of major lexical categories" (ibid. 21).

Aronoff's theory of word formation has been a remarkable contribution towards formulating an autonomous theory of morphology. Nevertheless, his word-based hypothesis has been questioned by many researchers invoking evidence from inflectional languages.²³ These criticisms can also be supported by drawing evidence from Tamil.

²². Halle's rather programmatic model has been criticized in later works, particularly in Aronoff (1976). Also, see Booij (1977).

²³. Aronoff's word-based Hypothesis is accepted by some linguists such as Jackendoff (1975), Booij (1977), Scalise (1980); and rejected by Bauer (1980), Siegel (1979), Allen (1978), Lieber (1981), Williams (1981a), Kiparsky (1982), Selkirk (1982). For a summary of the issue see Scalise (1986:71-74). Also, see Spencer (1991:87) for some examples from Russian.

In Tamil, word formation is not necessarily based on the existing words. The adjective and adverb in 3-4 and the complex nouns in 6 repeated here as 78-81 are generated by suffixing words.

78.	veekam-aa speed-ADV	>	veekamaa fast
79.	veekam-aana speed-ADJ	>	veekamaana Speedy (fast)
80.	niiti-maan law-NOML	>	niitimaan lawyer
81.	kuuli-kaaran wage-NOML	>	kuulikaaran Coolie

The Word-based Hypothesis is true for the forms given in 78-81, but it cannot apply to the finite verb in 2, repeated here as 82 and the deverbal nouns, exemplified in 83-85 and discussed in 2.1.1. below.

82.	(naan) poo-r-een. (I) go-PRES-1/SG I am going. (lit. I go)		
83a.	ciri-pu laugh-VNOML	>	cirippu smile
b.	paaTu-al sing-VNOML	>	paaTal singing/song
84a.	vaaci-kk-ir-atu read-kk-PRES-GNOML	>	vaacikkiratu The fact that X studies y = studying/reading
b.	paTi-kk-aat-atu study-kk-NEG/TENSE-GNOML	>	paTikkaatatu The fact that X does not studies = not studying/reading

- 85a. va-nt-a-van > vantavan
 come-PAST-ADJ-PNOML/3 SG MAS/ one who came
- b. caappiT-aat-a-van > caappiTaatavan
 eat-NEG-ADJ-PNOML/3 SG MAS/ one who did not eat

In these forms, the input verb stems are not free forms to appear as words, and always accompany suffixes such as tense, participles and nominalizers. Thus, they are not word-based as assumed by Aronoff.

Another issue that has been controversial within the Lexicalist Hypothesis, and in the theory of morphology in general is the domain of inflections and derivations. Aronoff (1976) and Anderson (1982), among others, hypothesize that inflections and derivations belong to two different components of grammar in that the former function in syntax whereas the latter operate in the lexicon. This approach is identified as the Weak Lexicalist Hypothesis since it splits morphology into two components. Some others, for example, Lieber (1981), Selkirk (1982), suggest that both inflections and derivations are in the lexicon. This is called the Strong Lexicalist Hypothesis.²⁴ Researchers have argued for one or other of these two hypotheses for the last two decades even though there is no general agreement. This controversy over the domain of morphology is explicitly depicted by Anderson's "Where's Morphology?" (1982) and by Jensen and Jensen's "Morphology Is in the Lexicon" (1984). Evaluating Anderson's views, Scalise (1986, (the 1st edition 1984)) points out that the "... weakness of Anderson's model, thus, lies exactly in the answer it gives to the question in the title of his paper, 'Where's morphology?'. His answer, as we have seen, would have to be 'everywhere'" (1986:196). Jensen and Jensen (1984) pose Anderson's question 'Where's Morphology?' and come up with the answer that morphology is in the lexicon and it "is not scattered around in various components of the grammars, some in the lexicon, some in the syntax, and some in the phonology" (p. 496).

The development of the theory of morphology and its controversial nature have been discussed so far. It is worth, then, questioning whether the data given in 2, and 6-9 (and their equivalents in section 2.1.1.) can be explained according to these hypotheses or whether they are problematic to the morphological theory. I turn to address this issue in the next section.

²⁴ The Strong Lexicalists are Halle (1973), Jackendoff (1975), Lapointe (1978), Lieber (1981), Scalise (1986), Williams (1981a), Kiparsky (1982), Selkirk (1982), among others and the Weak Lexicalists are Chomsky (1970), Siegel (1979), Aronoff (1976), Allen (1978), Anderson (1982), among others.

2.3.2.1. The Lexicalist Hypothesis and the deverbal nouns in Tamil

The most important property of gerundive nouns (GN) and participial nouns (PN) in Tamil is that they consist of both verbal and nominal (or inflectional and derivational) suffixes. As exemplified in 2.1.1.2 and 2.1.1.3 respectively, the GNs have tense suffixes inside the nominalizer and the PNs contain tense and adjectival participle suffixes inside the nominalizer. This combination of suffixes is problematic to the Weak Lexicalist Hypothesis as it assumes inflections take place after all derivations.

One possibility to characterize this peculiarity is to assume a lexical approach like the Lexical Phonology and Morphology (LPM). Christdas (1988) exploits the LPM model to analyze the Kanyakumari dialect of Tamil. She distributes tense suffixes between the level 1 and 2 of her two level LPM model and derives nominalizations in level 2.²⁵ In this approach, tensed verbs undergo cyclic phonological rules after a tense suffix is added in level 2. This allows the tensed verbs to observe level 2 rules, in this case nominalizers, once more. As a result, Christdas generates inflectional suffixes inside derivations. This analysis, however, has two flaws: First, applying the cyclic rules to the outputs of the level 2 rules is not economical. Second, LPM may differentiate the gerundive and participial nouns from the verbal nouns, based on the domain of rule application. Thus, one may distinguish GNs and PNs from VNs as the former two undergo cyclic rules, but the latter, e.g VNs, do not. Nevertheless, these two groups of nouns have different syntactic properties; verbs in PNs and GNs discharge their syntactic properties to syntax, but those in VNs do not. The VN in 86, unlike the GN in 87, is unacceptable as there are two nouns within the VN to represent the agent and theme of *paTi*, the verb inside the VN.

86. * naan puttakatt-ay paTi-p-pu
I book/OBL-ACC study-p-VNOML
My studying of the book

87. naan puttakatt-ay paTi-kk-ir-atu
I book/OBL-ACC study-kk-PRES-GNOML
The fact that I study the book

If all words are formed in the lexicon as assumed in the LPM, then, it is not explicit how Christdas would explain the properties of deverbal nominals, given in 7.4, - especially the

²⁵ See Kiparsky (1982), Mohanan (1982), (1986), Christdas (1988), for details on LPM.

fact that verbs included in VNs do not project their syntactic properties to the syntax, but those of GNs do - in a principled way.

In order to resolve the problem of having inflections inside derivation, one can propose to dismiss the distinction between inflections and derivations. The researchers within the Strong Lexicalist Hypothesis are of this opinion and do not distinguish inflectional suffixes from derivational ones. They generate both inflections and derivations in the lexicon, and consider that syntactic rules cannot refer to the internal structure of words.²⁶ This approach is also problematic to the data in 8-9. It was noted above that the input verbs of VNs do not discharge their syntactic and semantic properties to the syntax, but those of GNs and PNs do. If these three types of deverbal nouns are generated in the lexicon as proposed by the researchers of the Strong Lexicalist hypothesis, it is not clear how such an approach would explain the different syntactic behaviour of these nouns.

To summarize, theories of morphology have addressed two interrelated subjects. The first question concerns characterizing *word*, and the second aims at explaining word-formation. The data from Tamil are problematic to the former issue since lexical elements do not always obey the criteria proposed in determining *word*. The deverbal nouns in Tamil are problematic for the Lexicalist Hypothesis of word formation mainly for two reasons. First, GNs and PNs have inflectional suffixes inside derivational ones. Second, VNs have different syntactic behaviour to that of GNs and PNs. These observations show that the lexical approach is not adequate to explain the data given in 2.1.1. It motivates us to explore an alternative approach. Thus, two instances of syntactic approach to morphology will be given in the next section.

2.3.3. Syntactic approaches to morphology

Researchers within the Lexicalist Hypothesis have attempted to explain the domain of word formation by assuming either both inflections and derivations or only derivation to be in the lexicon, and have come up with different solutions. Meantime, some researchers have explored the differences of word formation in a principled way by applying principles of syntax to morphological categories. Fabb (1984) and Borer (1984), for example, identify two types of morphology depending on whether these categories obey

²⁶ This assumption is explicit in The Generalized Lexical Hypothesis proposed by Lapointe (1978) and (1981).

No syntactic rule can refer to a morphological feature or category.

Lapointe (1981:190)

the principles of syntax or not. The hypotheses put forward in these two works are sketched below to show the nature of syntactic treatment to morphology.

2.3.3.1. Syntactic Affixation (Fabb, 1984)

Fabb (1984) has suggested that the forming of productive and regular word-formations belongs to the syntax and the forming of derivations, output of which must be listed, belongs to the lexicon. He (ibid. 38-39) differentiates the syntactic and lexical word-formation processes as shown in 88.

88. Syntactic process:

- is productive;
- its output is predictable in all its properties;
- it takes syntactic constituent as its input;
- syntactic relations hold between the parts of the word, i.e. they do not violate the Projection Principle.

However, lexical word-formation:

- must list aspects of the output;
- makes the output to undergo lexical processes.

Applying these observations, Fabb suggests that some syntactic affixes have lexical doubles. He argues (ibid:204-216) gerundive *-ing*, for instance, is syntactic and productive whereas adjectival and non-process (nominal) *-ing* is lexical.

According to this approach diversity between lexical and syntactic processes is derived from the Projection Principle. Thus, Fabb examines syntactic and lexical behaviour of suffixes such as *-able*, *-ing*, *-ness*, *-ly*. Consequently, He (ibid. 257) concludes that forms - e.g. syntactic compounds, word + case assigning suffix, adjective + degree modifier suffix and possibly *un*-words - which are constructed in the syntax "must be well formed with respect to various syntactic principles such as, crucially, the Projection Principle", and that words which do not obey the Projection Principle are in the lexicon.²⁷

27. See 3.3.2. for an illustration of the Projection Principle. It states that syntactic properties projected from the lexicon must be preserved at each level, e.g. syntax, Logical form and Phonological Form.



2.3.3.2. Borer (1984)

Borer (1984), also, proposes a similar hypothesis. She accounts for differences and similarities between inflectional and derivational morphology exploiting the Projection Principle. According to her, two types of rules are distinguished based on the criteria given in 89.

- 89. a. The rules whose output do not violate the Projection Principle;
and
- b. The rules whose output violates the Projection principle.

The inflectional morphology under this assumption falls within the first type of rule. This suggests that "all rules which violate the Projection Principle must apply in a pre-syntactic level and cannot interact with any syntactic phenomena" (ibid. 20). Borer, like Fabb, also explains the differences between syntactic and lexical affixation applying her hypothesis to *-ing* suffix.²⁸

- 90. *-ing* as a lexical affix:
 - 1. - changes lexical category;
 - 2. - the case assigning property (of the verb) is eliminated;
 - 3. - obligatorily selects an agent theta role;
 - 4. - aspect reading is added.

Since the properties of 1-3 in 90 violate the Projection Principle the lexical *-ing* has to be attached in the lexicon. Nevertheless, syntactic *-ing* can be added in the syntax, because it,

- 91.
 - 1. - does not change syntactic category;
 - 2. - does not eliminate the case features;
 - 3. - does not place thematic relations on its output;
 - 4. - does not add any information;
 - 5. - is similar to the plural marker in this respect.

This approach has far reaching consequences. First, it derives the Lexicalist Hypothesis in a principled way in that all the derivations that do not obey the Projection

²⁸. Adger & Rhys (1991) argue for eliminating disjunction between lexical and syntactic *-ing*.

Principle are lexical. Interestingly, Borer acknowledges that some of the inflections that take place inside the derivational operation are also lexical or pre-syntactic if they do not obey the Projection Principle. As a result, the morphological operations are classified as lexical or syntactic depending on whether they obey the Projection Principle or not. Syntactic affixation observes the Projection Principle whereas lexical affixation does not. Hence, Borer derives the Lexicalist Hypothesis not merely by assumption, but by the principles of grammar.

Returning back to the data in 8-9 (and those in 2.1.1.2 and 2.1.1.3 in general) these syntactic approaches have advantages over the Lexicalist Hypothesis. First, they do not assume a distinction between inflections and derivations, but they account for whether the derivational procedure or the suffix in question is syntactically relevant or not. This approach, also, avoids the problems that concern the Lexicalist Hypothesis by disregarding the dichotomy between inflections and derivations. Assuming the syntactic relevance of suffixes or of derivation is an important criterion, this approach explains word formation in a principled way. Secondly, these hypotheses treat regular and productive word formation as syntactic. This provides a criterion for distinguishing syntactic properties from lexical ones. Because of these advantages, I suggest that a syntactic approach is appropriate for analyzing the data given in 2-9.

The discussion so far indicates that one of the questions associated with data in Tamil and with the morphological theory in general concerns the distinction between inflections and derivations. The properties of these two are examined next to explore whether this traditional distinction can be retained.

2.4. Inflection and derivation

Differentiating inflections from derivations has been one of the problems in morphological theory. Researchers, both in the past and present have proposed several criteria for differentiating these two categories rather than defining them.²⁹ These measures are explained in this section whereby a conclusion will be drawn that this dichotomy is not absolute, and thus cannot be retained.

First, inflectional suffixes show parallel distribution in a sequence of items and form a paradigm. Verbs in Tamil, for example, receive tense and agreement suffixes, and nouns are inflected for number and case. In 92, the tense and agreement suffixes are

²⁹. For a full discussion see Anderson (1985:150-201), (1992:74-85), Katamba (1993:206-244), Scalise (1986:102-136), Bybee (1985:11-19, 81-109).

attached to the verb *poo* 'go'. In 93, the case suffixes are added to the noun *naay* 'dog' in the singular, and they follow the suffix *-kal*, that follows *naay*, in the plural.

92.

Present tense:

poo-r-een.

go-PRES-1/SG

I am going. (lit. I go.)

Past tense:

poo-n-een.

go-PAST-1/SG

I went.

Future tense:

poo-v-een.

go-FUTURE 1/SG

(or habitual marker) I shall go.

93.

Case	Suffix	SG	PL
Nominative	--	naay	naay-ka/naay-nka
Accusative	a(y)	naay-a(y)	naay-kal-a(y)
Dative	(u)kku	naay-ukku	naay-kal-ukku
Genitive	in		
	uTaya		
	atu	naay-in	naay-kal-in
	uTTu		
	oblique base form		
Sociative	ooTu	naay-ooTu	naay-kal-ooTu
Instrumental	aalay	naay-aala(y)	naay-kal-aala(y)
Locative	ila(y)	naay-ila(y)	naay-kal-ila(y)
Ablative	ilay iruntu	naay-ilay-iruntu	naay-kal-ilay-iruntu

Derivations are considered not to form paradigms, and hence, differ from inflections. At first sight, this assumption seems to be correct. However, examples 94-97 show that this observation is not absolutely true. They have verb stems that are attached to several derivational suffixes paradigmatically.

94.	Verbal participle	va-ntu ³⁰ come-PART Having come
95.	Adjectival participle	va-nt-a come-PAST-ADJ Coming
96.	Conditional	va-nt-aal ³¹ come-PAST-COND If X comes
97.	Concessional	va-nt-aalum come-PAST-CONCE Even if X comes

These forms provide counter examples to the traditional assumption that derivational categories do not have paradigms, and indicate that the first criterion proposed is not satisfactory.³²

Second, derivational suffixes always precede inflectional suffixes and attach to (verb or noun) stems or other derived forms. In 98-99 the derivational suffixes *-ation* and *-al* follow the verb stem and the resulting forms are well accepted. The noun in 100, however, is not well formed as it has an inflectional suffix inside the derivational one.

- 98. transform + ation
- 99. transform + ation + al
- 100. * transform+s+ation

³⁰. See 5.4.2.2. for details on *-ntu*, the verbal participle.

³¹. *-nt* in conditional and concessional forms is idiosyncratic and may be related to the pragmatic and/or semantic factors.

³². For some supportive evidence for this claim see Spencer (1991:194)

Examples 98-100 show that the inflectional and derivational suffixes have different positions within a structure, i.e. derivational suffixes appear closer to stems than inflections. In other words, as proposed by the researches from the Lexicalist Hypothesis (Anderson (1982), (1988), Lapointe (1981)) inflections occur outside derivations. If this observation is true, then, the reason for this peculiar ordering relationship could be, as Bybee (1985) describes, the semantic relevance between the stem and the derivational suffix. According to Bybee "a meaning element is *relevant* to another meaning element if the semantic content of the first directly affects or modifies the semantic content of the second" (p. 13). The meaning of derivational suffixes affects the content of a verb stem in greater degree than that of inflectional suffixes. Thus, derivational suffixes are more relevant for the semantic interpretation of the lexical items in question than inflectional ones and are closer to verb stems. All these observations imply that derivations are more lexical than inflections. Hence, the order of the inflectional and derivational suffixes, as Scalise (1986:103) formulates, is as given in 101a, but not as in 101b.

- 101. a. word- derivation - inflection
- b. * word - inflection - derivation

It is noted, however, that inflectional and derivational suffixes in some languages violate this structural relationship. Rice (1985) gives an example where inflections occur inside derivations. In Slave, an Athapaskan language, subjects, objects and deictic pronouns have two characteristics: (a) they agree with verb showing that they are inflectional; (b) within the template of a sentence they are realized inside the derivations. Rice, therefore, argues that, at least, some inflections in Slave are inside derivations. Interestingly, GNs and PNs in Tamil, as observed in 2.1.1.2 and 2.1.1.3, provide good examples in this regard.

- 102. paTi- kk-ir-atu.
study-kk-PRES-GNOML
studying
- 103. camay-kk-ir-a-van
cook-kk-PRES-ADJ-PNOML/3 SG MAS/
cook

104. paTi-cci-kiTT(u)-iru-kk-ir-a-van
study-PART-PROG-be-kk-PRES-ADJ-PNOML/3 SG MAS/
one who is studying
105. paTi-ppi-kk-ir-a-van
study-CAUS-kk-PRES-ADJ-PNOML/3 SG MAS/
The one who is teaching (= teacher)

These nouns have the structure given in 106 where the derivational suffix appears after the tense suffix which is derivational.

106. V + (CAUS) + (PROG) + TENSE + NOML

Once these nominals are formed, they can be inflected for case and number like any other simple noun. So, the PN in 107 is the inflected form of the noun in 103.

107. camay-kk-ir-a-vun-kal-ukku
cook-kk-PRES-ADJ-PNOML/3 SG MAS/-PL-DAT
To the one who cooks

Obviously, these deverbal nouns are problematic to the traditional criterion and the Weak Lexicalist Hypothesis that assumes inflections follow all derivations.

Third, derivational suffixes, but not the inflectional suffixes, may change the syntactic category of the input.³³ Derived nouns and adverbs, as exemplified in 108-109 change the category of the input and receive the properties of the suffix.

108. V + SUF > N

transform	>	transformation
write	>	writing
remove	>	removal

³³. See Scalise (1986:103) for more information in this regard.

109. ADJ + SUF > ADV
- | | | |
|--------|---|----------|
| new | > | newly |
| clever | > | cleverly |

This observation is true, but there are instances where derivational suffixes do not change the syntactic category of the input verbs. In English, the prefix *un* can be attached to an adjective to derive another adjective with negative meaning. Evidently, this results in no category changing.

- 110.
- | | | |
|-------------|---|------------|
| a. happy | > | unhappy |
| b. lucky | > | unlucky |
| c. pleasant | > | unpleasant |

In Tamil, derivational suffixes *caali*, *aali* and *tanam* can be attached to simple or verbal nouns to derive nouns. In examples 111-112, nouns are formed by attaching *caali* and *tanam* to simple nouns and in 113-114 *aali* is added to a verbal noun to form nouns.³⁴

- | | | | |
|------|------------------------------|---|-------------------------------|
| 111. | putti-caali
wisdom-NOML | > | putticaali
wiseman/scholar |
| 112. | maTay-tanam
fool-NOML | > | maTayattanam
Foolishness |
| 113. | kuuTTam-aali
company-NOML | > | kuuTTaali
Companion/friend |
| 114. | kaaval-aali
guard-NOML | > | kaavalaali
guardian |

One may argue that derivations change the meaning of stems, but inflections do not. *un* in 110 changes the meaning of the input lexical elements and expresses negation. Nonetheless, inflections add information to the meaning of the input lexical items rather

³⁴. *kuuTTam* and *kaaval* seem to be derived by attaching suffixes to *kuuTu* 'gather' and *kaa* 'guard'. Nevertheless, they are not considered to be derived nouns, since, according to K. Velayutham, *kuuTu* and *kaa* are not used as verbs in the present day spoken Tamil, though they occur in dictionaries. See 7.5.1. for more details.

than changing their meaning.³⁵ Evidently, there is some truth in this observation. Yet it is interesting to note that in both categories the basic meaning of the input is affected by adding new information without having a complete change of semantics. The verbal participles and adjectival participles in Tamil given in 115 and 116 have retained the meaning of the input verbs even after the derivation of participle forms.

115. Verbal participle:

va-ntu

come-PART

Having come

116. Adjectival participle:

va-nt-a

come-PAST-ADJ

Coming (past)

This shows that change of category and meaning is not an unquestionable criterion in determining the dichotomy between inflections and derivations.

Fourth, inflections are distinguished from derivations according to their productivity.³⁶ The former, unlike the latter, are considered to be productive and obligatory. Verbs, for example, may receive one or more suffixes such as agreement, tense and finite, and nouns may accompany number and case suffixes. Contrary to that, derivations may have idiosyncratic properties and are not obligatory. Therefore, some derivational suffixes attach only to small number of inputs.

Productivity as a distinctive property of inflections cannot always be maintained as there are idiosyncrasies in inflections as well.³⁷ According to Anderson (1985:163, 1992:78) though verb inflections are quite productive, in Russian there are about 150 (defective) verbs which cannot be inflected for the first person singular subject in the present tense. Also, some nouns in English have irregular plural marking, e.g. *oxen*. In

³⁵. Anderson (1992:78) characterizes this property of inflections, i.e. the inability to change the category of the input, as semantic neutrality. He also observes that there are counter examples according to which derivations do not change the category of the input. He exemplifies this through Chinese data.

³⁶. The notion lexical generality of Bybee (1985:84-85) is similar to productivity.

³⁷. See Spencer (1991:75) and Anderson (1992:78) for details.

Tamil, defective verbs inflect only for the third person singular as shown in 117, and modal verbs take neither tense nor agreement suffixes.

117. en-akku calli kiTay-cc-atu.
I/OBL-DAT money receive-PAST-3/SG/NEUTER
I received money. (lit. To me money received)
118. naanka ippa poo-k-a eel-um.
we now go-k-INFN can-FN
We can go/leave now.

Further, the past tense morpheme in Tamil has a number of allomorphs which have severe restrictions in application. *-cc*, for example, is used with transitive verbs whereas *-nc* accompanies intransitive verbs.

119. raaman naaTT-a(y) renT-aa piri-cc-aan.
Raman country/OBL-ACC two-ADV divide-PAST-3/SG/MAS
Raman divided the country into two.
120. kaTci renT-aa piri-nc-atu.
party two-ADV divide-PAST-3/SG/NEUTER
The party divided into two.

Moreover, in English, and also in Tamil gerundive nominals are fully productive, though they are assumed to be derivational. *-ly* adverbs in English are another instance of productive derivations. This evidence shows that productivity cannot be a sufficient criterion for distinguishing inflections from derivations.

Obligatoriness is assumed to be related to inflectional suffixes as a requirement of grammaticality, but not to derivational suffixes. The noun phrase in 121a is grammatical since the inflectional suffix appears on the noun and the demonstrative pronoun and the noun agree in number. 121b-c are unacceptable. In 121b, the inflectional suffix occurs where it is not necessary. In 121c the agreement relationship between the modifier and the noun has not been satisfied since the inflectional suffix does not accompany the noun.

121. a. These books
- b. * this books
- c. * these book

Obligatoriness as a property of inflection, but not of derivation cannot always be maintained. In some cases, derivational suffixes are also obligatory for the well formedness of the lexical items in question. Katamba (1993:206), following Greenberg (1954), points out that derivational suffixes are not obligatory in some occurrences. The noun with the derivational suffix *-er* in 122a, for example, can be substituted without affecting the grammaticality of the sentence by a simple noun as in 122b. Nevertheless, this approach cannot be generalized to 123a where *-er* is obligatory. Thus, the syntactic well formedness requires the noun in 123a to have *-er* obligatorily for it to be grammatical.

122. a. The farmer is in the barn.
 - b. The farm is in the village.
-
123. a. The writer has published a new book.
 - b. * The write has published a new book.

This evidence implies that productivity and obligatoriness are also not adequate criteria for differentiating inflection from derivation.

Fifth, inflectional suffixes can be portmanteau morphs. This means that one suffix carries several inflectional morphemes such as person, number and gender. It has been observed, however, that inflectional and derivational morphemes do not combine to form one portmanteau. Researchers take this property as a strong argument for distinguishing inflectional suffixes from derivational ones. This is because it is not easy to find a counter example for this criterion. The reason for this could be the fact that inflections are related to other grammatical categories outside the word level, but derivational suffixes are not. For instance, number, gender, and agreement marking on verbs should be compatible with the properties of the subject noun phrase, but derivational suffixes do not have such a requirement and are strictly local. Relevance, as Bybee (1985:13-15, 36-37, 58) has pointed out, may also have an effect on this difference. The suffixes that affect the meaning of a stem or those that are more relevant are closely associated with stems, but not less affective (or non-relevance) ones. Therefore, syncretizing intimately and remotely related morphemes is logically impossible and rather difficult.

Six, the functions performed by inflections and derivations have been counted as a criterion for differentiating them.³⁸ The former "complete" words by relating them to a larger construction while the latter, the derivations, form new words. It is, of course, true that these two categories carry out different tasks. Yet the criterion given to account for this difference is not completely satisfactory either. Inflectional categories can also be considered to be a means of creating new forms, as derivations do, and of fulfilling requirements of the theory of grammar. Case in nouns, for instance, is a grammatical requirement without which grammaticality would not result. Further, agreement properties such as person, number and gender, occur in verbs not merely to complete the verb forms, but also to be able to agree with the features relevant to noun phrases and to co-index with them. A tense suffix appears in a verb to express time reference, but not merely for "completing" the verb form. It is interesting to note that some verbs such as modals and negatives in Tamil, do not accompany tense suffixes. If inflectional suffixes are solely for completing verb forms, then, one may argue that the modal verbs are incomplete since they do not have tense suffixes. This is simply not true.

On the contrary, not only inflections, but also derivations can be treated as a means of making "complete" words. The sentence in 124 is ungrammatical as it has an adjective form in place of adverb.

124. * He reads regular. ³⁹

Ungrammaticality of sentence 124 is due to the fact that the adjective *regular* is not properly related to the main sentence. To make it complete and grammatical the adverbial suffix *-ly* has to be attached to the adjective to form an adverb as shown in 125.

125. He reads regularly.

This exemplifies that treating inflections as a way of creating complete words does not reveal the truth.

Seven, inflections are considered to be syntactic, but derivations are not. Anderson (1982:587) spells out this as "Inflectional morphology is what is relevant to the syntax". Nonetheless, in some structures, it is not obvious whether some (derived) forms

³⁸. See Anderson (1985:162) for details.

³⁹. Ronnie Cann pointed out to me that this sentence is acceptable in some dialects of English.

are inflections or derivations. Matthews (1974:53-54) discusses the difficulty of identifying past verbal participles from adjectival participles. He points out that *crowded* in *crowded room* behaves as an adjectival participle, but *heated* in *heated room* does not. In these examples, the suffix is identical in both cases and does not offer a clue to identify whether the resulting word is an inflectional form or a derivational form. To solve this difficulty evidence from their modifiers can be drawn. As shown in 126a and 126b adjectives can be modified by *very*, whereas the past participial forms cannot. Thus, the adjectival form is considered to be derivational, but the verbal participle is taken to be inflectional.

126. a. a very crowded room
b. * a very heated room

Wasow (1977) derives this difference assuming two types of passives: namely, adjectival passives, and verbal passives. Scalise (1986) points out that though past participles seem to interact with both inflections and derivations, they are actually derivational forms.⁴⁰ These numerous views indicate that even this criterion is highly controversial and is not an adequate criterion for differentiating inflections from derivations.

To summarize, this section has so far illustrated that the criteria proposed for distinguishing inflection from derivation. None of them are exhaustive and hence are not satisfactory. Additionally, the difference between inflections and derivations cannot be determined by category or by form, because tests such as prefixation, vowel change may belong to both inflectional and derivational categories. Also, category specification of some suffixes may vary from language to language. According to Anderson (1992:80) diminutives in English, for example, are derivational since they do not undergo syntactic rule. Nevertheless, in Fula they are inflectional.⁴¹ In German, diminutives are formed by adding suffixes, and the resulting forms are considered to be derivational according to their behaviour.⁴² Katamba (1993:215-216), with reference to Bybee (1985:102-105), Boas (1947:246), (1982:589), reports that in English, number is inflectional, but in native American languages, for instance, Diegueno and Kwakwala, number is a derivational

⁴⁰. For a detailed account on this issue, see Scalise (1986:127-131).

⁴¹. Katamba (1993:210) and Anderson (1992:80) give examples with reference to Arnott (1970).

⁴². For more details see Anderson, (1985:162), Katamba (1993: 212).

category. It may imply (a) repeated action, (b) several subjects (c) an action occurring simultaneously in different parts of a unit. Hence, Katamba (1993) assumes that "the difference between inflection and derivation is a cline rather than a dichotomy. **Prototypical inflectional morphemes** (e.g. verbal affixes in English) are very strongly syntactically determined while prototypical derivational morphemes (e.g. *-er* as in *worker*) are very weakly syntactically determined. In between there is a continuum of syntactic determination. The terms 'inflection' and 'derivation' simply indicate the degree of syntactic relevance" (p. 217).

This evidence shows that empirically the dichotomy between inflections and derivations cannot be strongly supported, though intuitively two types of "word formations" are hypothesized. Therefore, in the present work no distinction will be made concerning these suffixes. As a result, all idiosyncratic, irregular forms are specified in the lexicon and regular, productive word formation is carried out in the syntax.

Some linguists, however, attempt to explain the dichotomy between inflections and derivations by assuming two sorts of rules for lexical and syntactic word formation. Anderson (1992), for example, proposes "that the difference between inflection and derivation inheres not in substantively defined categories, but in particular instances of rule application" (ibid. p. 76. fn. 3). Hence, derivations are a property of morphology on which the lexical rules operate and inflection is the domain of morphology where syntactic rules and word formation rules interact. This claim is examined in the next section to explore whether it provides any positive evidence for retaining the inflection and derivation distinction.

2.5. Lexical rules and syntactic rules

Anderson (1988:148-9, 1992:39-42), with reference to Chomsky (1970), Jackendoff (1975), Wasow (1977) and Anderson (1977), characterizes several differences between syntactic rules and lexical rules.

1. Lexical rules, but not syntactic rules, are necessarily 'structure preserving' (in roughly the sense of Emonds 1976), since all lexical items - whether basic or derived by lexical rule - must be inserted into the same set of base structures.

2. Lexical rules may relate items from distinct lexical classes (e.g. deriving nouns from verbs), while there is no reason to give syntactic rules the power to change category.

3. Lexical rules are local in the sense that they can only refer to material within the subcategorization frame of a single item. Nevertheless, syntactic rules can relate positions not within a single item's subcategorization frame, as for instance, in the case of 'subject to subject raising'.

4. Lexical rules have access to the thematic relations (theta-roles) associated with particular arguments, while there is no reason to believe a syntactic rule could ever affect, say, exactly agents (as opposed to affecting exactly subjects).

5. Lexical rules apply to one another's outputs, but not to the output of syntactic rules.

6. Lexical rules can have arbitrary, lexical exceptions, while syntactic rules are structurally general.

All these assumptions are appealing at first glance, but they can be argued to be not accurate when they are examined by exploiting the theories of morphology and syntax. It is standardly assumed, according to a version of Government and Binding theory, that move-alpha applies to X^0 s as well as XP categories. Therefore, words can be formed in the syntax by applying move alpha to X^0 categories. With this assumption, I explore Anderson's claims next.⁴³

1. Structure preservation: According to Anderson (1992:39), lexical rules produce X^0 categories which can be inserted into X^0 argument positions of an underived sentence, and are confined only to establishing and describing arguments of a particular lexical item. They do not refer to moved categories or A-bar positions. Thus, unlike syntactic rules, the lexical rules do not change the syntactic structure. However, an examination of syntactic derivations reveals that not only lexical rules, but syntactic rules also preserve syntactic structures. Phrasal categories, for example, are moved only to phrasal nodes and Heads are moved only to Head positions leaving traces behind to indicate the basic sentence structure. In other words, even after the syntactic derivations are completed, the traces of moved categories show the underived basic syntactic structures of the sentences. This implies that syntactic rules also preserve the structures, contra Anderson's first claim.

⁴³. See Tait (1991:7-9) for some discussion on this issue.

Another implication of this criterion is that the lexical rules apply to X^0 s. If application of lexical rules are confined to X^0 categories, then participial nouns, gerundive nouns and adjectival participles in Tamil can observe such rules because these forms may be considered as X^0 s, as assumed by Christdas (1988).

127. Participial nouns:

poo-n-a-van	>	poonavan
go-PAST-ADJ-PNOML/3 SG MAS/		one who went

128. Gerundive nouns:

poo-n-atu	>	poonatu
go-PAST-GNOML		The fact that X went

129. Adjectival participle:

poo-n-a	>	poona
go-PAST-ADJ		going (past)

These examples have inflectional suffixes inside derivations. If inflections, as Anderson assumes, observe syntactic rules, these syntactic rules may interact with lexical rules in deriving X^0 s in 127-129.⁴⁴ Hence, Anderson's first criterion for distinguishing lexical rules from syntactic rules is paradoxical and is not satisfactory.

2. Syncategorematicity: Category changing is assumed to be a main characteristic of lexical rules, but as exemplified in examples 111-114, there are instances where lexical rules do not change the categorial specification of the lexical items. Yet in contrast to the general assumption that syntactic rules may not change the category labels, Head movements change lexical specifications. Thus, through Chomsky adjunction items from different categories are joined together in order to produce multi-morphemic units. This gives some sort of category changing in the syntax. Further, Wh-movements to Specifiers of CPs change the underspecified specifier into [+Wh] phrases. Also, Anderson (1992:40), with reference to Williams (1981a), has noticed that when suffixes are assumed to be 'heads', these 'Head Movements' result in change of the category of the moved element.⁴⁵ It must be noted, however, that these movement rules change the dominance

⁴⁴. Otherwise Anderson has to accept, as Borer (1984) assumes, that, at least, some inflections are in the lexicon.

relationship rather than change category. This is because Heads retain their syntactic category even after they are moved and attached to a non-head node dominated by another category. In this way, head movements change the dominance relationship, but not the syntactic category of the moved element. At the same time, the moved element preserves the syntactic structure by leaving a trace behind.

3. Locality: Locality is not confined solely to lexical rules, as Anderson has assumed, but syntactic rules also observe some kind of locality. The distinction of locality in these two contexts is related to the differential interpretation of the notion. Lexical rules can refer only to the (lexical) items within the subcategorization frame of a single item. Similarly, syntactic rules also operate over the domains of principles such as Government, Bounding, Binding where locality is significant. Head movements (Baker 1988), for example, are strictly local, because the X^0 category can only be moved to the Head position that governs it. Moreover, the principles of subjacency, the Empty Category Principle (ECP), and the notion of Barrier are other instances of locality constraint in the syntax.⁴⁶

4. Reference to grammatical vs thematic relations: Patterns of passivization in many languages give evidence against the fact that 'lexical rules may have access to the thematic relations associated with particular arguments', but syntactic rules do not have that capacity. That is because in passives the agent theta role, not merely the subject, is affected. The unaccusative verbs cannot be passivized since they do not have agents that bear the external theta roles.⁴⁷ Interestingly, in 'transitive passives', the agent is affected, but not the theme. The transitive passives in Ukrainian provide good examples for this observation. In these passives, the agent is not realized; the theme is assigned accusative case in parallel to the accusative case in the active sentence; and the verb is changed into passive. Spencer (1991:240) has quoted two sentences from Sobin (1985) to exemplify these issues. 130a is the active counter part of the passive sentence in 130b.

⁴⁵. For a discussion on 'Head' and 'Head movements' see 3.4 and 3.5.1.

⁴⁶. See Chomsky (1986), Baker (1988) (particularly for local rules p. 53, 421, fn. 25), Sells (1985) for further details.

⁴⁷. For an illustration see Spencer (1991:260).

130. a. Zbudovali cerkvu v 1640 roc'i.
they-built church-ACC in 1640 year
They built the church in 1640.
- b. Cerkvu bulo
church-ACC was-NEUTER/SG
zbudovano v 1640 roc'i
built-PASS/NEUTER/SG in 1640 year
The church was built in 1640.

This evidence clearly shows that not only lexical rules, but also syntactic rules relate to thematic roles, contra Anderson's observation that the lexical rules have access to the thematic roles, but syntactic rules do not.

5. Relative order: Anderson states that the lexical rules apply to one another's output, but not to the output of syntactic rules. Hence, a resulting form of a lexical rule can be an input to another lexical rule, but an output of a syntactic rule does not obey lexical rules.⁴⁸ It seems that this observation is mainly based on the assumption that syntactic rules do not have access to the internal structure of words and that inflections appear after all derivations. This claim is not accurate as there are examples that have reversed relative order. They show that the relative order cannot be sufficient criterion for distinguishing lexical rules from syntactic rules.

6. Exceptionality: Assuming that lexical rules have idiosyncratic properties, but not syntactic rules is an over simplification of the truth. Syntactic operations as well have idiosyncrasies, although they are relatively productive. For example, in English all transitive verbs do not have passives, and dative shift is not allowed for some verbs, e.g. *donate*. In Tamil, modals, defective and negative verbs do not take tense markers, despite the fact that verbs in general inflect for tense.

These remarks indicate that assuming two types of rules is not convincing. Further, hypothesizing two types of rules is problematic to the data presented in 8-9 and 127-129. First, if derived words are the results of lexical rule application, then, GNs and

⁴⁸. In order to explain the instances where level 2 (e.g. inflectional) suffixes appear inside level 1 (e.g. derivational) suffixes, in lexical phonology and morphology frame work Mohanan (1982, 1986) has proposed a "loop". Loop is the device which allows a derived form to return back to previous level in order to undergo the same or similar rules (process) repeatedly. This assumption, as Lieber (1992:19) points out, undermines the Lexicalists Hypothesis.

PNs must be lexical. If this is true, then, either lexical rules can be applied after syntactic rules or the tense suffixes are derivational.⁴⁹ These two assumptions are problematic since the former violates the Strong Lexicalist Hypothesis, and the latter does not obey the Weak Lexicalist Hypothesis. It was also shown in 2.3.2.1 that deriving GNs and PNs lexically has other problems as well. Second, when two types of rules are accepted, the tense suffixes of GNs and PNs may have two different behaviours. They, according to the rules they undergo, can be both inflectional and derivational. They are derivational when they observe lexical rules whereas they are inflectional once they obey syntactic rules. This approach is not economical, and hence is not desirable.

To summarize, this discussion has illustrated the difficulty of drawing a clear-cut distinction between lexical and syntactic rules. Hence, applying such a rule system for distinguishing inflections from derivations is not entirely satisfactory or accurate. Hence, the dichotomy between inflections and derivations cannot be maintained by two types of rules, namely, lexical and syntactic rules. Obviously, the relationship between inflections and derivations and lexical rules and syntactic rules is a circular one. One can argue that inflections and derivations exist since there is a rule distinction between lexical rules and syntactic rules. Conversely, there is a distinction between rules as there are two types of word formations, inflections and derivations.

These arguments show that the criteria proposed to justify the existence of two types of word formations and two types of rules are not exhaustive. Also, there is no general consent among researchers about what belongs to which category. Therefore, no distinction is made between inflections and derivations in the present study. Instead, the different characteristics of suffixes can be predicted according to their syntactic behaviour. Thus, those suffixes that obey syntactic rules are treated as syntactic while others are considered as lexical. One of the explicit characteristics of syntactic suffixes is that they are relatively productive. This indicates that irregular, idiosyncratic forms are lexical whereas regular productive ones are syntactic. One of the implications of this assumption is that productivity is a property of the syntax, but not of the lexicon. A brief note on productivity is given next as it is one of the topics which has been often discussed in morphology.

⁴⁹. Di Sciullo and Williams (1987) does not consider a distinction between inflectional and derivational suffixes and apply both categories in the morphological component.

2.6. Productivity

In the theories where rule application is taken to be important, productivity is taken as a criterion for determining the domain of word formation rules (WFR). Accordingly, less-productive groups of words which are semantically idiosyncratic are listed and productive processes are treated as the domain of WFRs. For example, Aronoff distinguishes very productive rules from less productive rules. According to him, output of less productive rules are mainly non-compositional and (most of the time) have to be listed. In contrast to that the output of the productive rules are compositional. Hence they have predictable meaning, and are not listed. This productive morphology is considered to be the domain of word formation rules.⁵⁰

It is worth noting here that productive rules may generate possible, but not actual words. Kastovsky (1986:593) points out that in such a case, they are checked against the existing inventory of lexical items and may be rejected if they do not satisfy any immediate need. This indicates that the productivity of a rule and the formation of new words are controlled by language external factors such as immediate need, acceptability and frequency of application. Consequently, Kastovsky assumes that productivity of lexical rules, unlike that of syntactic rules, is determined by the frequency of actual rule application that results in a hierarchy of productivity.

Di Sciullo & Williams (1987:15) also observe a similar phenomenon. According to them, the units in the bottom of the hierarchy have a higher tendency to be listed than others; thus, all morphemes have to be listed, but not all words; compounds, phrases, and sentences are respectively in the hierarchy where less and less need is required for listing. New morphemes have to be listed, but not new sentences. New morphemes, therefore, cause difficulties to the language learner as they have to be listed.⁵¹ Thus, stems, affixes and unproductive idiosyncratic forms are listed in the lexicon, leaving transparent, concatenative morphology in the syntax. Lieber (1992) spells out that productive morphology is in the syntax. "My point is rather to suggest that a reasonable decision process is available, so that the goal of constructing a theory of word formation that accounts for all and only productive word formation process is at least in principle a realistic one" (p. 9).

⁵⁰. See Aronoff (1976, 35-45) and Walsh (1984:133) for some details.

⁵¹. See Tait (1991:5) for a similar observation.

Some researchers, meantime, consider productivity to be relational. Brian (1980) among others hypothesizes that syntactic rules are not more productive than lexical rules, but two types of rules have harmonious and cooperative relation.

These different views show that productivity is associated with rules and their application. This observation is questionable when the dichotomy between inflections and derivations is eliminated. If there is not a rule distinction between inflections and derivations or syntactic and lexical rules, productivity becomes a less important notion because a comparison of different sorts of rules and their application is unavailable.

Further, if productivity is determined based on inflections and derivations, and the former are considered to be more productive than the latter, then, PNs and GNs provide counter examples. It was shown that GN and PN suffixes are productive and regular like any other inflectional suffix. This indicates that, at least, some derivational suffixes are as productive as inflectional suffixes. The opposite is also true in that some inflectional suffixes have some restrictions. Tense and agreement suffixes in Tamil, for example, have some restrictions, although they are relatively productive. So they do not accompany modal verbs. The auxiliary verbs give another instance of peculiarity.⁵² Some auxiliaries follow certain types of verbs which are relatively small in number, but some others are attached to main verbs with less restriction. This implies that the productivity of syntactic rules is also relational; some are more productive than others. In these cases, less productive ones are, however, not treated as idiosyncrasies as they have some regularity and form some sort of paradigm. This means that regularity is important in distinguishing lexical categories from syntactic ones. Thus, regularity and productivity are assumed to be properties of syntax.

2.7. Summary

Morphology is not a properly defined subject area in the theory of grammar. Not only defining "what morphology is", but also its content and the domain of its operation, have always been questioned from different theoretical perspectives. In the first place, characterizing *word* has been problematic because the criteria suggested for determining word have not been satisfactory. Second, the domain and the procedure of word formation have been controversial.

Tamil provides rather problematic data to these two issues. *Words* in Tamil do not always follow the criteria of determining *word*. More interestingly, the participial nouns

⁵². For details about the auxiliary verbs see chapter 6.

and gerundive nouns in Tamil, given in 2.1.1.2 and 2.1.1.3, are problematic to the morphological theory since they have inflectional suffixes inside derivations. In order to illustrate the nature of this difficulty, I have outlined the short history of the morphological theory. Analyzing PNs and GNs within the Structuralist Hypothesis is difficult since this approach may not distinguish different syntactic properties of deverbal nouns. These nouns violate the Weak Lexicalist Hypothesis as they have 'inflectional' suffixes inside 'derivational' ones. As an alternative two syntactic approaches were sketched and their advantages towards a possible solution were discussed. Subsequently, having explained that the dichotomy between inflections and derivations has been the topic of controversy over 'Where's morphology?', the properties of those two types of morphology were discussed, and the possibility of retaining these two was examined. This discussion has revealed that the criteria assumed for determining inflections and derivations as well as lexical and syntactic rules are not exhaustive. Thus, no distinction is made in the present work between inflections and derivations. Subsequently, sketchy remarks on productivity, another issue discussed in the literature, was presented. Productivity is a significant notion in the theories that assume different sorts of rules. Nevertheless, eliminating two types of rules undermines the importance of the notion 'productivity'. Hence, regular, concatenative morphology with predictable meaning has been assumed to be productive and syntactic, as against lexical theories of morphology.

The history of morphological theory shows that generative morphology has discussed the domain of word formation extensively. Yet researchers have not reached a compelling answer to the issues that concern defining *word* and identifying the domain of morphology. Some researchers, Di Sciullo & Williams (1987), for example, are interested in formulating a morphological theory within the lexicon. Others assume that morphology is another subtheory of grammar. Baker (1988) spells out this hypothesis. "... morphology is in effect another subtheory, roughly on a par with the established subtheories of principles of Government-Binding theory" (p. 68). He suggests that all the morphemes which are associated with grammatical function changing (e.g. productive morphology) be put into syntax and the rest be kept in the lexicon. According to Baker, morphology is divided into both lexicon and syntax where the lexicon is a "disposal" in morphology theory which consists of "a simple list of forms".⁵³ Still some others, Spencer (1991) among others, hypothesizes that morphology is not a separate component, but it represents

⁵³. Baker uses the term lexicon to refer to "a level of grammar at which the inherent properties of items are represented, in particular, those properties which are atomic from the point view of other levels" (1988: 68).

a set of rules and principles which together go to define well-formedness of words. Thus, he distributes morphological operations among the lexicon, syntax and phonology. In 8.4, I shall show that morphology is not confined to one single component of the grammar, but it operates in the lexicon, syntax, and phonological component.

2.8. Conclusion

This chapter so far has outlined a short history and the controversial nature of morphological theory. In this background one's approach to morphology may be determined by two factors: (a) the data from the target language and (b) the theoretical interest of the researcher. Baker (1988) expresses this opinion in the following:

"One's destination and the purpose of one's journey always affect one's path and even one's style of walking. In the same way, the research goals and values I have sketched have consequences for how data are used and how arguments are constructed" (p. 29).

In relation to the data given in 2 and 7-9 of this chapter, one of the goals of the present study is analyzing morphosyntactic properties of PNs and GNs. It is obvious now that these nouns have complex morphology, and contribute data to the controversy over 'Where's morphology?'. This is because these nouns have verbal inflections inside derivational suffixes. Thus, a study of these verbal nouns naturally requires some analysis of verbal morphology as well. Therefore, to begin with verbal morphology is analyzed in chapter 4-6, prior to the discussion on the PNs and GNs in chapter 7. Apparently, study of the complex morphological categories, given in 2.1.1, must be based on some theory. Therefore, I turn to discuss possible theoretical notions in the next chapter.

Chapter 3

Syntactic approach to morphology. Some theoretical assumptions

3.0. Introduction

In Section 2.3.2.1, it has been shown that PNs and GNs are problematic to the morphological theories, particularly to the Lexicalist Hypothesis. However, I have indicated in 2.3.3 that, at least, some of these problems can be explained easily by assuming a syntactic approach to morphology. In addition to this apparent advantage, analyzing morphology within a syntactic framework can also illustrate how word structure mirrors the syntactic structure reflecting the interface between morphology and syntax. Thus, for the exploration of morphosyntactic properties of deverbal nominals, I assume a version of Principles and Parameters framework of Government and Binding theory formulated in Chomsky (1981), (1986) and (1988 a).

The principles, according to the Principles and Parameters framework, are a set of properties common to all human languages. Thus, they, by their very nature, are universal. One would inherit these principles, that are known as universal grammar (UG), as a genetic make up. On the contrary, the parameters are a finite set of values which are set for individual languages separately. Therefore, diversities of languages are assumed to be due to the different values of parameters. This indicates that the underlying structure of languages is identical as they are based on the principles of UG, but they deviate according to the differences of parameter settings. In this way, the Principles and Parameters theory provides a principled way to grasp both uniformity and diversity among (human) languages. It must be noted, however, that although researchers are in general agreement as far as UG and the function of parameters are concerned they do not have a consensus with regard to the exact nature and number of the parameters. For instance, the hypothesis outlined in Chomsky (1986) considers parameters to be associated with the

principles of UG. Chomsky assumes that these parameters are switches with a number of open positions that can be set by a language learner on the basis of direct and positive evidence.¹ Another hypothesis formulated by Borer (1984a) relates parameters to individual inflectional categories. This assumption states that the presence (or absence) of a particular inflectional form causes language variation.² A language learner determines parameters for the language in question when he encounters the positive evidence.

The grammar according to the Government and Binding theory consists of several modules. The lexicon is assumed to be the place where all free and bound forms appear with their lexical specifications. These lexical items are projected to D-structure to generate basic syntactic structures. The Projection Principle regulates projections of these categories from the lexicon into D-structure according to their lexical specifications and prevents any changes of categories, thus projected, during their derivation. The X-bar theory provides a schema to generate basic syntactic structures from the thus projected lexical items. Accordingly, these structures observe syntactic rules to generate well formed sentences at S-structure.³ These sentences then pass through Logical Form (LF) and Phonological Form (PF) in order to receive proper perceptual and phonological interpretations.

Having outlined the general theoretical back ground, I move on to describe the basics of X-bar schema in section 3.1. Section 3.2, then, differentiates free forms (lexical categories) from bound ones (functional categories). This section also shows how the lexical and functional categories are presented in the lexicon. In section 3.4, the notion 'Head' is briefly discussed. Section 3.5 applies the assumptions made in this chapter to the adjectival suffix to illustrate the functional category approach.

3.1. X-bar theory

The formal schema of the X-bar theory has three levels, e.g. X^0 , X' , and X'' (= XP) and poses two kinds of relations, namely, dominance and sister relationship.⁴ The sister

1. For a discussion on parameters setting see Travis (1989) who illustrates evidence from Chinese and Kpelle.

2. For a discussion on advantages of associating parameters with inflectional categories see Wexler & Manzini (1987), (cited in Tsimpli (1991)) and Ouhalla (1991).

3. Chomsky (1992) argues for eliminating D-structure and S-structure from the theory of grammar since they are not conceptually necessary. I shall return to this issue in chapter 8. Till then I will use the general notion 'syntax' without making distinction between these two levels of grammar. For a different view see Cann (1993b:4)

relationship appears horizontally in a tree. The position sister to X' is called specifier and the one sister to X^0 is complement. Relationship of a domination occurs vertically between the levels of a tree. XP (or X double bar), the highest level of a phrase structure (PS) tree dominates X' , the single-bar level of the tree, and its sister. X' dominates X^0 , the zero level category and its sister, the complement. This results in the X-bar schema in 1.5,6

4. Since Chomsky's 1970, different proposals have been made about phrase structure theory. Jackendoff (1977:53) proposes three types of X-bars, e.g. X' , X'' , X''' which result in four levels (no more). Stuurman (1985) argues for a single projection-type where only two levels, e.g. X^0 , X' exist. He also discusses the development of the X-bar theory. See also Radford (1988:59ff), Chomsky (1970), Emonds (1976) among others.

5. A different interpretation for X-bar notion is given in Baltin (1989). He proposes that "the principles of X-bar theory operate in a "bottom up" fashion reminiscent of Categorical Grammar". This results in the following;

- a. $X + Y = X'$
- b. $Spec + X' = X''$

(his Example. 45. p. 5)

Y in (a) stands for a maximal projection. These notions seem to be much more plausible since projections are based on the lexical (or functional) heads. If this is true, Baltin's schema has to be modified to make provisions for free iteration.

- $X + Y = X'$
- $X' + Y = X'$
- $Spec + X' = X''$

To defend this notion, Baltin's definition of Y has to be amended. Thus, Y is interpreted either as a complement or modifier depending on its structural relationship to X and X' respectively.

6. Speas (1990) proposes to eliminate X-bar conditions from the grammar since X-bar conditions (Stowell (1981) are redundant and also empirically incorrect. Accordingly, she assumes that bar level is not a primitive of grammar and suggests that X minimal and X maximal projections are defined terms. These projections are defined as follows.

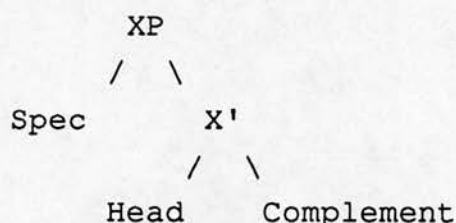
- "Maximal Projections: $X = X^{\max}$ iff $\forall G$ which dominate X , $G \neq X$.
 - Minimal projection: $X = X^0$ iff immediately dominates a word"
- (Speas 1990:44)

As a result, intermediate nodes are identified as instances of the elsewhere case and are allowed to iterate freely. This gives the Project Alpha a chance to have any number of arguments and modifiers within the projection of X . Like Baltin (1989), Speas also allows X^0 to project from bottom to up in which process it can have many numbers of specifiers (complements). It is worth noticing here, however, that in this proposal argument-like adjuncts are projected into D-structure, but not other types of adjuncts. The latter is projected to S-structure.

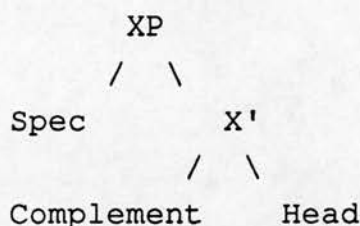
1. a. $XP > \text{Specifier}, X'$
- b. $X' > XP, X$

Directionality of heads (X^0 s) and their complements shows parametric variations. Some languages are head final while others are head initial. Head initial languages have their complements to the right of the head; the opposite is true for the head final languages. Accordingly, English, a head initial language and Tamil, a head final language have the following X-bar schematic tree structures.⁷

2. English:



Tamil:



The formal schema of X-bar theory shows the relationship among head, complement and specifier. The notions Head and Complement are not difficult to characterize. Head in syntax is the X^0 category that projects up to its maximal projection XP. The complement is the $X(P)$ category that is subcategorized-for its head. Yet there is no general consent concerning the nature and function of the specifier. It is obvious from the tree in 2 that the specifier is the daughter of XP and the sister of X' .⁸ Some

⁷. Kayne (1993) argues that all languages are head initial. It is, however, not certain how this proposal can be applied to a head final language like Tamil. It appears that if Kayne's proposal is assumed, many movements, probably unnecessary, have to be done to derive the right word order.

⁸. See Emonds (1985:18-21, particularly his formula in 10a and 11 in page 20) for a definition of the specifier.

researchers assume specifier to be the category or position that co-indexes with the features of the head.⁹ This node is also identified as either a theta-position or a landing site depending on the phrasal category.¹⁰ For example, the specifier of a verb phrase is characterized as the syntactic position where the agent of a verb is realized and/or the nominative case is assigned.¹¹ The specifier of a Complementizer Phrase (CP) is a landing site for a moved category such as Wh-word. Ernst (1991) differentiates specifier from Spec. According to him, Spec is the position sister to X' whereas specifiers are X⁰s that do not project up to X^{max} (= XP). These X⁰s belong to a class of items such as demonstratives, classifiers, quantifiers, degree words and so on and can appear in Spec positions. Assuming binary branching, he hypothesizes that a phrase consists of only one Spec which is filled by only one Specifier. These different hypotheses show two characteristics of the specifier; it is the daughter to XP and the sister to X'; it has different functions such as being a landing site, theta position or a co-indexing category. Assuming these two are correct, I identify the syntactic position that appears as the daughter to XP and the sister to X' as the specifier.

The categories associated with the X-bar schema have so far been characterized. Nevertheless, it does not indicate how adjuncts (or modifiers) such as adverbs, adjectives and the noun phrases associated with the optional syntactic and semantic properties of verbs, relate to this structure.¹² It has been noted that the complement is the sister of the head and the specifier is the sister of X'. Adjuncts cannot be realized between the head and the complement because it has been standardly assumed that the complement must be realized adjacent to the head for various theoretical reasons. Thus, the possibility is to iterate X' whereby iterated X's, except the highest one which is the sister to the specifier, receive XPs as adjuncts.¹³ In other words, this indicates that adjuncts appear between the specifier and the complement of a syntactic tree. It is worth noticing that Adjuncts differ from specifiers in several ways. First, adjuncts are optional, but specifiers are obligatory if

9. See Tait & Cann (1990:212-213) and Cann (1993a:57-59) for details.

10. See Tait (1991: 150-183), particularly p. 182, and Lieber (1992:38-53) for a detailed discussion on this issue.

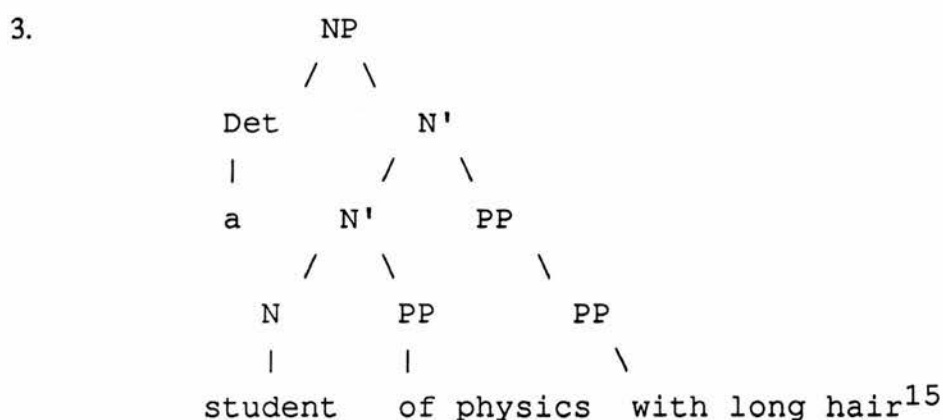
11. See Ouhalla (1991) and the references cited there for details in this regard. Stowell (1989) discusses subjects as specifiers.

12. See Lieber (1992:38) and Stowell (1989) for some discussion on the notion 'modifier'.

13. See Radford (1988:187-215, 597), Andrews (1982), (1983) for a similar approach.

there are Kase features, in the sense of Fukui & Speas (1986), to be realized.¹⁴ Second, the properties of the specifiers must be compatible with those of their heads, but this is not a requirement for adjuncts. Third, specifiers are realized prior to syntactic derivations whereas adjuncts may occur after the derivation. Fourth, obviously, specifiers are dominated by XPs (or the maximal projections of head categories), but adjuncts are dominated by X's.

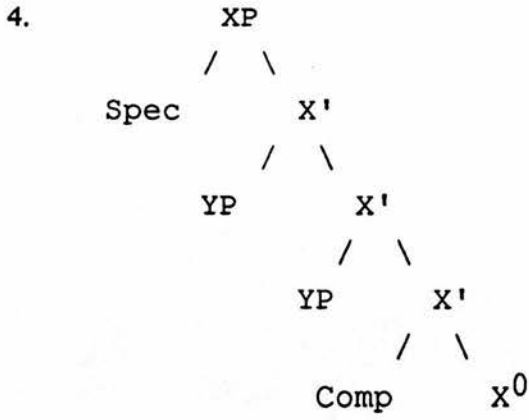
These four categories, namely, head, complement, adjunct and specifier, are schematically presented in 3. In this tree, the determiner is the specifier of the NP; the complement is realized as sister to the head noun; the adjunct Prepositional Phrase (PP) occurs as a sister to X'.



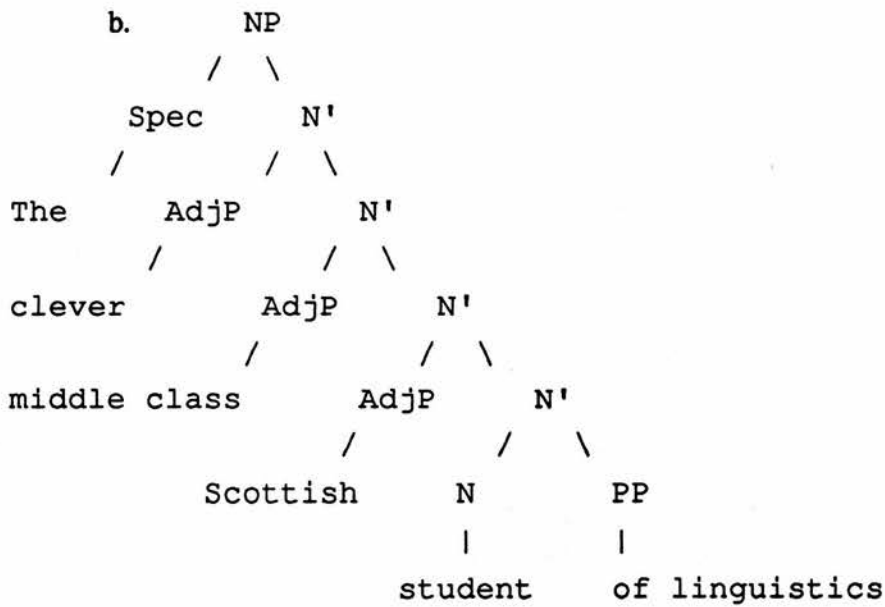
Apparently, iterated X' categories have the advantage of generating prolonged phrases with more than one adjunct. This is shown in 4 schematically where several adjuncts, marked as YPs, appear between the specifier and the complement.

14. Fukui & Speas (1986) employ the notion 'Kase' to describe 'case' in the standard sense as well as to express grammatical features such as agreement, determiner.

15. This example is due to Radford (1988:179).

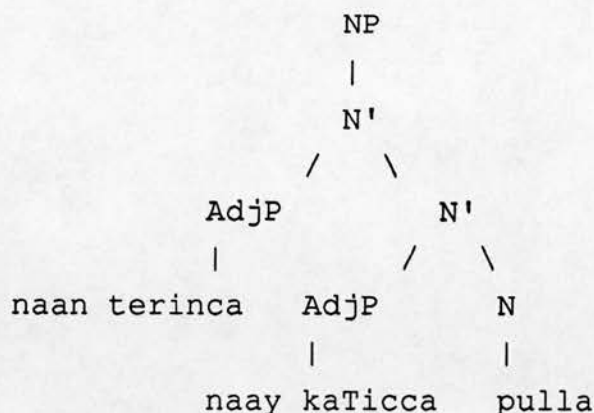


5. a. The clever, middle class, Scottish student of linguistics,



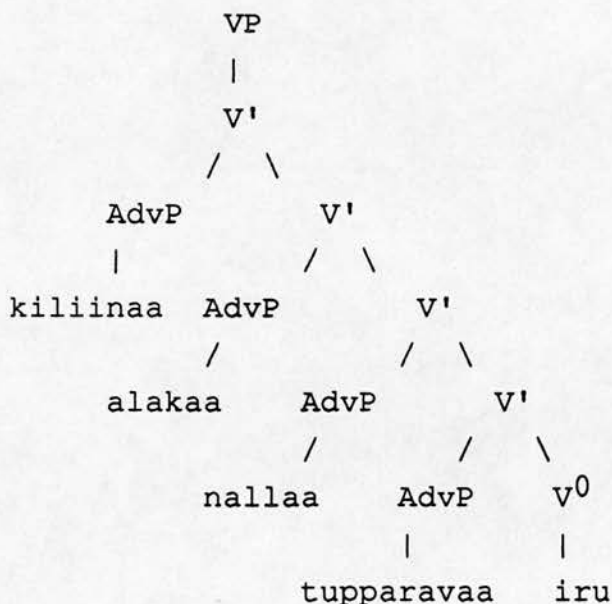
6 a. naan teri-nc-a, naay kaTi-cc-a pulla
 I know-PAST-ADJ dog bit-PAST-ADJ girl
 The girl whom I know and whom the dog bit,

6b.



- 7a. kiliin-aa, alak-aa, nall-aa, tupparav-aa, iru-kk-a veen-um.
 clean-ADV beauty-ADV good-ADV fair-ADV be-kk-INFN must-FN
 You should stay cleanly, beautifully, well and neat (literary meaning).

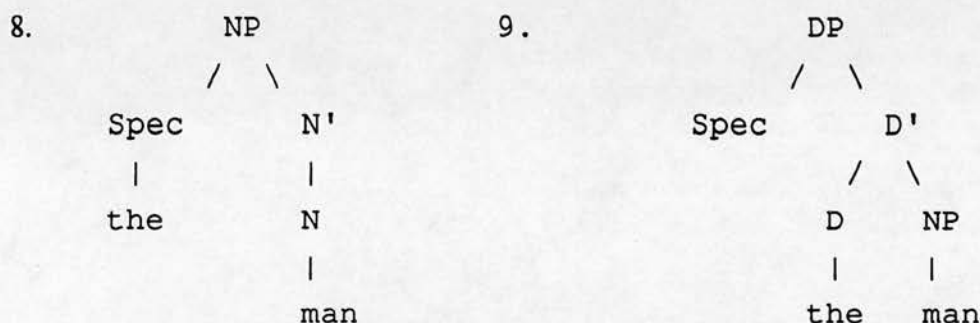
b.



In the 1970's, the X-bar theory accounted for only the major lexical categories (N, V, A, P) as heads, because they can project independently from the lexicon into the syntax.¹⁶ Stowell (1981) introduced Complementizer Phrase (CP) and Inflectional Phrase (IP) to the phrase structure replacing S' and S, and considered the CP and IP as the maximal projections of non-lexical categories C and I.¹⁷ Since then, researchers have

¹⁶. Jackendoff (1977) did not recognize the minor categories like Det(erminer), Com(plementizer), Aux(iliary), though he fully projects them as independent categories.

proposed numerous non-lexical categories as heads of their own maximal projections. According to DP Hypothesis of Abney (1987), a determiner heads a determiner phrase and takes an NP complement. Examples 8 and 9 illustrate two approaches, namely, The Extended Standard Theory and DP Hypothesis, to the determiner and NP. In 8, the Determiner is in the Specifier of NP as assumed in the EST, and in 9, the Determiner heads its own maximal projection and takes an NP complement observing the DP Hypothesis.



Recently, researchers have assumed many other morphological categories as heads of their own projections. Chomsky (1988b) analyzes tense and agreement as two different heads; Pollock (1989) and Mitchell (1991) treat tense, agreement and negation as different syntactic heads. Pollock (1989) suggests splitting INFL into two, namely, Tense Phrase (TP) and Agreement Phrase (AgrP). This paper also identifies Negation (NegP) as a separate category. These different morphological categories that head syntactic projections have been subsequently identified as functional heads.

The functional category approach to morphology hypothesizes that the functional categories select lexical categories as their complements and determine the sentence structure(s). One apparent advantage of this approach is that it shows the interface between morphology and syntax.

When two syntactic categories, e.g. lexical and functional, are assumed, there emerges a necessity to characterize them. There is general consent that elements marked as [+/-V] and [+/-N] are lexical categories. Nevertheless, the exact nature and number of functional categories are not properly identified. Vincent (1993), for example, agrees that Det, Comp and Agr are F-categories, but he hesitates to identify other categories, such as tense, Neg, as F-categories. Cann & Tait (1994) at the extreme end assume all non-theta marked affixes with selectional properties are functional categories. These two views show that depending on one's theoretical approach the number of functional categories for

17. See Stowell (1981) and Chomsky (1986), (1988a).

a given language may vary considerably. Hence, first I explain the properties of these two categories before deciding what functional categories exist in Tamil.

3.2. Functional categories vs Lexical categories

The functional categories (FC) differ from lexical categories (LC) in several respects. The first and the foremost characteristic of FCs is that they, unlike LCs, have selectional properties. Grimshaw (1991) provides a circular definition in this regard. "Functional heads are those that take lexical complements, and lexical heads are those whose projections occur as complements to functional head". (p. 6). Ernst (1991:190) also assumes selectional properties as a determining criterion of FCs. According to him FCs may head their own projections, taking a complement; or they may be realized as a feature on another category or as an affix; they may be independent words. Ouhalla (1991) argues that the bound forms that have Morpheme (M-selection) selectional or Categorical (C-selection) selectional properties, but not Semantic (S-selection) selectional properties, are functional heads. All these remarks illustrate that there is general agreement that FCs have selectional properties as opposed to LCs.

One of the advantages of this assumption is that it gives an insight into the subcategorization problems discussed in Baltin (1989). Baltin first assumes that subcategorization is always for the head, and then argues that the matrix predicates are directly subcategorized for their complementizers which in turn are subcategorized for complements. In sentence 10 and 11 (Baltin's examples 37 and 38) the matrix verbs are subcategorized for complementizers that subsequently take either finite or non-finite sentences as complements. It is not explicit whether Baltin implies both functional and lexical heads as heads in this paper. If head in this case is used to indicate functional heads, then, Baltin's discussion gives good examples for the observation that the functional heads have selectional properties. So Baltin's claim can be restated as subcategorization is always for lexical or functional heads. The same result can be derived assuming Cann (1993a:52) that suggests, at least, in some instances the functional heads select features, but not categories. In 10 and 11, the matrix verbs select for a complementizer, the head of CP. The complementizer, then, selects either [+FINITE] or [-FINITE] feature. Thus, *that* selects for [+FINITE], and *for* selects for [-FINITE]. This analysis indicates that the differences of the sentences in 10 and 11 are due to the selectional restrictions of the complementizers.

- 10 a. John declared that Sally was insane.
 b. * John declared for Sally to be insane.
- 11 a. * I was waiting that Sally left.
 b. I was waiting for Sally to leave.

In some other cases, however, a head may not specify the properties of its complement. For example, the complementizer *whether* does not select the features, but only the category. It accompanies [+FINITE] and [-FINITE] features, one at a time. Thus both 12 and 13 are grammatical.

12. I don't know whether or not to work on that.

13. I don't know whether or not I should work on that.

(Baltin, 1989, ex. 52, 53)

In relation to the selectional properties, some researchers assume that LCs, but not FCs have Semantic selectional properties which form their theta grids.¹⁸ Ouhalla (1991:13-14) and Cann (1993a:52) among others take this property to differentiate LCs from FCs. Ouhalla argues that the functional categories have C-selection and M-selection, but not S-selection. This claim, however, is not unquestionable. It is true for many cases that FCs do not have S-selectional properties, but there are instances in which this observation cannot be generalized. Thus, with reference to the research on determiners (Bentham, 1983), Aspect (Dowty, 1979) and Modality (Roberts, 1986), Ernst (1991:204) questions the assumption that the functional categories do not have a semantic content. Tamil provides a concrete example in this regard. In Tamil, a set of verbs expresses attitudes when they occur with verbal participles.¹⁹ This may imply that they are bound morphemes and have selectional properties. This is an indication that they have the properties of the functional categories. Nevertheless, these verbs, in parallel to the counterpart main verbs, also have semantic selectional properties. This shows that these verbs as FCs have not only C-selection, but also S-selection. If this assumption is correct, then, assuming the lack of S-selection as a determining criterion of FCs is not accurate.

18. Some researchers question this observation and assume Det., AspP and Modal also may have semantic content (Ernst, 1991:204, note 1).

19. These verbs will be described in 6.3.1 (in particular 6.3.1.2).

On the contrary, if S-selection is common to both lexical and functional categories, and hence, cannot be a determining factor of these two, then one may wonder whether M-selection and C-selection are common to both of them. Ouhalla (1991) argues that these two types of selectional properties are confined only to the functional categories. Thus, I assume the selectional property, mainly morphological and categorial, is the most significant characteristic of the functional categories. As a result, any other properties are considered to be secondary to the selectional properties. I discuss some of these properties next.

A second property that differentiates lexical categories from the functional categories is related to pragmatic and grammatical differences. LCs are obviously the instrument of a flow of thoughts; and their meanings are very important in conveying a message. Without LCs one cannot express one's needs and thoughts. In this regard, the reference of the LCs is related to the knowledge of the external world. Yet FCs such as complementizer, agreement, tense, aspect, and so on do not express encyclopaedic information, but they carry pure linguistic one.²⁰ Hence, when these two categories are combined, FCs relate LCs to a context and express complete ideas with full references.

Third, LCs are, in general, common to all human languages since they are based on the meanings and concepts associated with the world outside. In contrast to LCs, FCs can be varied from language to language since they are language specific. Chomsky (1988 b) points out that "If substantives (verbs, nouns etc.) are drawn from an invariant universal vocabulary, then only functional elements will be parametrized" (p. 2). Fukui (1986), (1987), (1988) and Fukui and Speas (1986) illustrate the parametric variations between English and Japanese according to the presence and absence of functional categories. Fukui (1988:256ff) observes that Japanese lacks the functional categories resulting in the following parametric variations.

20. Ernst (1991) questions the supposition (in GB) that the functional categories do not have 'semantic content'.

14.	Parameter	English	Japanese
1.	Syntactic Wh-movement	yes	no
2.	Overt expletives	yes	no
3.	Scrambling	no	yes
4.	Multiple subject- constructions	no	yes
5.	Subject-aux - inversion	yes	no
6.	Word-level complex predicates.	no	yes

Iatridou (1990), also, points out that languages vary according to the functional categories that they instantiate. She suggests that the evidence for the existence of functional categories such as Causative Phrase, Benefactive Phrase have to be found in individual languages. It has been observed that not only the presence or absence of FCs, but also differences of their linear order cause parametric variations. Ouhalla (1991), describes this phenomenon drawing evidence from four genetically different languages, e.g. English, Swahili, Berber and Turkish. According to him in VSO languages, tense C-selects agreement, but in SVO languages agreement C-selects tense. So, in VSO languages the linear order of a derived verb form is [VERB + AGR + TENSE] whereas in SVO languages it is [VERB + TENSE + AGR]. It is also interesting to note that languages may differ depending on the value given to a specific (functional) category. Huang (1982) is a good example for clarifying this observation. He argues that Wh-constructions in English and Chinese are equal except the fact that these two languages give two different treatment to Wh-constructions. In English Wh-movement applies in syntax whereas in Chinese it operates in LF.

Fourth, LCs are numerous. The number of LCs can be multiplied in many ways such as creating new words, borrowings and generating (new) words affixing to the existing morphemes. Nevertheless, FCs are few in number and are rarely coined. Based on the openness to new elements LCs and FCs are respectively called open class and close class categories.²¹ This restriction of FCs has been related to the fact that etymologically, FCs (at least some, if not all) are derived from LCs. Vincent (1993:144ff), invoking evidence from English, Gulf Arabic, French and Latin, states that "function words are always etymologically derived from lexical words". He further notes that

21. See for similar classification Ouhalla (1991:9-10) and Baker (1988:141), among others.

function words "represent intermediate stages in a historical evolution from independent lexical items to morphologically bound affixes and ultimately inclusion as part of the opaque make-up of an arbitrary linguistic sign" (p. 145-146).²² Tamil provides a good example for this claim. In Tamil, *-nnu*, the shortened form of the verbal participle of the verb *en* 'say' is used as a complementizer. (compare the past participle form *ennu* with *-nnu*).

15. *avar vaa-r-aar* *nnu con-n-aar*.
 he come-PRES-3/SG/HP COMP say-PAST-3/SG/HP
 He_i said that (Pro) he_{k/i} comes.

Further, *-nnu* is optionally reduced to the bound morpheme *-nu*. When this reduced form occurs in a sentence *colli*, the verbal participle form of *col* 'say' may follow *-nu*. This gives the variant in 16 for the sentence in 15.

16. *avar vaa-r-aar-nu* *coll-i con-n-aar*.
 he come-PRES-3/SG/HP-COMP say-PART say-PAST-3/SG/HP
 He_i said that (Pro) he_{k/i} comes.

Fifth, multiple occurrences of FCs never appear within the same domain. Fukui & Speas (1986) observe this property of FCs and exploit it to characterize the X-bar schema. According to them, the functional trees have a specifier position if and only if the functional heads have Kase properties to percolate up to its Specifier position.²³ The XP dominating the specifier, then, closes off the category projection. Unlike functional trees, lexical trees "are never closed off" since they do not have case properties to license a specifier position. Consequently, LCs project any number of iterated X single-bar

22. See Burling (1992:302-307) for a similar observation.

23. Fukui & Speas (ibid) formulate this assumption as Functional Projection Theorem.

Functional Projection Theorem:

"A functional head projects to the X" level iff there is Kase to be discharged to its Spec. position. Otherwise, it projects only to X'.

Fukui & Speas (1986:154)

levels.²⁴ Hence, multiple occurrences of FCs are unavailable. The NP in 18 is unacceptable as the functional item *the*, the determiner, occurs twice. Nevertheless, the one in 19 is not ungrammatical, though it has two appearances of *very*. This is because *very*, unlike *the*, belongs to a lexical category.

17. The old man

18. * The The old man

19. The very very old man

This characteristic of FCs can also be explained, as shown at the beginning of this section, by hypothesizing that FCs, but not LCs, have selectional properties. It has been assumed that functional heads, unlike L-heads, must have their complements realized locally. In 17, the DP *the old man* is grammatical since the determiner head *the* has satisfied its complement requirement by having an NP with it. The ungrammaticality of the DP in 18 arises when an extra determiner is added. When more than one determiner is projected into a DP which has only one noun phrase, one of the determiner heads does not receive a complement as there is only one NP. Thus, this additional determiner head cannot satisfy its complement requirements and violates the PF Licensing Principle which advocates that every syntactic node must be headed by a phonetically realized material or by a trace.²⁵ LCs do not have such a requirement; hence, 19 is grammatical. The ungrammaticality of the NP in 18 also shows that F-categories are not allowed to select or govern themselves. Thus, a determiner head cannot select another determiner as its complement or govern an expression which has common properties like definiteness. Violation of any of these constraints results in ungrammaticalities as exemplified by 20 and 21. The determiner head in 20 has selected another determiner head as its complement, and the one in 21 governs a demonstrative which shares a common property, i.e. definiteness.²⁶

20. * The the boy

24. Speas (1990) rejects this proposal of Fukui & Speas (1986) and observes that the distribution of the two categories is restricted by the other principles of grammar.

25. For more details see section 3.5.1 below.

26. For a detailed discussion see Cann (1993a:62-63).

21. * The this boy

These restrictions show that the ungrammaticality of the phrases given by Fukui & Speas (1986) can be derived by general principles of grammar without serious modification to the X-bar theory.

One of the reasons for the ungrammaticality of the NP in 18 is that it has a determiner head with an empty complement. The DP, however, is ungrammatical even after the complement requirement of determiners is satisfied.

22. * The boy the old man laughed

23. * The man the old man laughed

These sentences are starred since they violate case theory which requires obligatory case marking on each phonetically overt NP. *the boy* in 22 and *the man* in 23 are not case marked because the verb *laugh* has the ability to case mark only one NP that satisfies its agent theta role. *laugh* has assigned nominative case to *the old man* in 22-23. Therefore, the NPs *the boy* and *the man* cannot be properly licensed when they are not assigned a theta role or case. This evidence shows that the distinction between LCs and FCs in relation to iterability is derivable from the properties of FCs such as the selectional property and a principle of grammar, e.g. Case theory. This indicates, contra Fukui & Speas (1986), there is no need to modify X-bar schema to explain recursive nature of LCs, as against FCs.

Several properties of LCs and FCs have so far been outlined. The primary assumption is that it is the selectional property that is most important to characterize FCs and to differentiate them from LCs. All the other properties contribute to this main property to distinguish FCs from LCs.

3.3. The Lexica

Once two different categories are characterized, two issues immediately require some clarification. The first question concerns the lexical status of FCs and LCs. The second is related to projections. These two are explained below respectively in section 3.3.1 and 3.3.2.

3.3.1. Two Lexica: F-lexicon vs C-lexicon

It is evident now that the functional and lexical elements have different properties and behave differently. Thus, in parallel to this dichotomy, two different lexica are assumed, following Ouhalla (1991) and Cann (1993b). Ouhalla (1991:10) (also Tsimplici and Ouhalla (1990) cited in Ouhalla 1991) proposes having two separate lexica, 'mental lexicon' for LCs and 'grammatical lexicon' for FCs. Cann (1993b), drawing evidence from psycholinguistic and aphasiological studies, assumes two lexica, e.g. functional (F) lexicon and cognitive (C) lexicon, for these two categories. He, with reference to Shillcock and Bard (1993), points out that "content categories prime content homophones, whereas functional categories do not prime items in the cognitive lexicon" (p. 3). The existence of two lexica is further supported by the fact that fluent and non-fluent aphasics show different behaviour in using and comprehending lexical and functional categories.²⁷ The former have difficulty with lexico-semantic information in comprehension while the latter have problems with using functional categories and hence controlling syntactic operations. Thus, Cann hypothesizes that LCs are in the C-lexicon (or mental lexicon), and FCs are in the F-lexicon (or grammatical lexicon).

The C-lexicon consists of encyclopaedic information and the F-lexicon contains grammatical information. In the C-lexicon, LCs have syntactic, semantic and phonological information. The lexical entry for *cry* looks like 24.²⁸

24. *cry*: < *cry*, 'act'; V; (X) X:Agent; *krai*'.. >

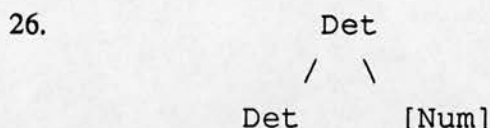
Entries for FCs differ from those of LCs. They mainly show selectional restrictions and idiosyncrasies of application. Therefore, following Tait (1991), they are presented as functional trees. Invoking the assumption that the functional categories select either a (major) category or a morpheme I present the functional tree for the determiner *the* as in 25.

- 25.
- | |
|-------------|
| Det |
| / \ |
| Det NP |

27. For some more evidence, see Hoeksema (1988, particularly p. 135-136 and the references cited there).

28. See for details 8.2.1.

However, in this case, Cann (1993a) assumes that a category that form-governs its sister selects not the major category, but the property of that sister.²⁹ Thus, determiner selects not for an NP, but for [Num] (= number) which is subcategorized for an NP.



To summarize, the X-bar theoretic notions and the characteristics and representations of FCs and LCs have so far been illustrated. First, in section 3.1, the formal version of the X-bar theory was described. Accordingly, in order to allow for adjuncts to appear, this schema was modified by assuming a recursive node between the specifier and the complement. Second, the distinction between the functional and lexical categories was outlined. The primary distinction between LCs and FCs is that the latter have selectional properties, but the former do not. FCs, unlike LCs, do not multiply within the same phrase and cause parametric variation. LCs express encyclopaedic information whereas FCs show grammatical relations. Consequently, in the C-lexicon LCs are represented as dictionary forms whereas FCs are given as tree-like structures in the F-lexicon.

3.3.2. Projection of functional and lexical categories

The theory outlined so far has assumed that FCs select LCs as their complements. The implication of this hypothesis is that FCs are significant and take precedence over LCs in formation of syntactic structures. Thus, when FCs are projected into syntax, the X-bar theory regulates syntactic structures based on the information encoded in the FCs. LCs are inserted into the thus generated structures.³⁰

According to the Government and Binding Theory, another principle, namely, the Projection Principle also operates in D-structure. This principle, given in 27, proposes to preserve the information projected from the lexicon unchanged at every level of the grammar.

29. Form Government: X is a governor in X+Y if there is some group of inflectional variants, x_1, \dots, x_n in X that all induce the same proper binary partition on the expression-forms of Y according to their morphological form.

30. This position is the exactly opposite to the traditional belief that major categories constitute the sentence structure and minor categories fill the gaps inbetween major categories.

27. Projection Principle: informal statement.

"Representations at each syntactic level (i.e., LF, and D- and S- structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items".

(Chomsky (1981:29))

In other words, the information projected from the lexicon should remain constant during the derivation according to the projection principle. Thus, if a verb selects a CP complement as its theme this CP should remain unchanged at every level of the grammar.

In chapter 2, it has been argued that the dichotomy between inflections and derivations cannot be maintained as the distinction between these two is not exhaustive and that the criteria proposed to determine these two categories are not fully satisfactory. In this chapter, FCs have been differentiated from LCs employing several criteria. This discussion has proposed, without making any distinction between inflectional and derivational suffixes, that bound morphemes, both inflectional and derivational, are functional heads. This assumption, that is, all morphemes with selectional properties are (functional) heads, has a great impact on the notion, 'head', another issue which has often been discussed in the morphological theories. Thus, in the next section, the notion head is described and a proposal will be made that head is a notion related only to the syntax.

3.4. Head

The notion "Head" in morphology has been another controversial subject. Some researchers argue that Head is not relevant to morphology while others are of the opinion that there should be some kind of mechanism to identify the syntactic category and features of the derived words. Skillen, (1988:79ff) bears the view of the former group. She rejects the notion of Head in morphology and argues that "morphological combinability is a matter of occurrence dependency". Williams (1981a) is of the opposite view. He proposes that the right most constituent of a word is the head. The head, according to the Right hand Head Rule (RHR), determines the category and the other syntactic features of the output word.³¹ According to this hypothesis, if a derived word consists of several derivational suffixes each suffix appears to be the head when it is the rightmost element. Scalise (1988) modifies Williams' proposals and asserts that the RHR is only valid for

³¹. Importing the notion of head from the syntax to the morphology Williams (1981a) discusses how features could be percolated.

derivational morphology because they change the category of input, unlike prefixes, inflectional markers and compounds.

Acknowledging the works of Williams and others, on "the head in morphology" Zwicky (1985) discusses the parallelism of the head in the syntax and the head in the morphology. He recognizes the morphosyntactic locus, that is the bearer of the inflectional marker, as the head in feature percolation. According to him, category determination is not a property of head, but it depends on the rules that are applied. Zwicky states that "it will suffice to specify instead that inflectional suffixation is an operation on the rightmost morpheme in a word, and that determination is a property of rules, not of constituents combined by those rules" (ibid. p. 21). The implication of this is that Zwicky assumes the head features as the result of the rule operation, contra Williams and Scalise who assume the category changing suffix is the head.

The notion head in morphology is not unquestionable. First, as shown previously, there is no general agreement on the fact that determination of the category of a derived form is a property of the (morphological) head. Williams and Scalise support this claim, but Zwicky argues against it. Second, it has been argued in 2.4 that category changing is not a property confined to derivational suffixes or morphology, inflectional suffixes also change category in syntax by changing domination relationship. Thus, assuming head as a category determiner in morphology is not satisfactory. Further, Zwicky considers determination of the category as a property of rules. Nevertheless, when the distinction between the lexical and syntactic rules is abandoned, as shown in 2.5, determining category cannot be an outcome of rule application. Fourth, assuming the morphosyntactic locus to be a property of a head is problematic to the GNs and PNs, described in 2.1.1.2 and 2.1.1.3. PNs consist of a verb stem, tense suffix, adjectival participle suffix and a nominalizer. If the bearer of inflectional suffix is assumed to be a head verb stems in PNs are heads. Interestingly, the same criterion suggests that the other suffixes are not heads as none of them act as morphosyntactic locus. This is because in traditional terms the adjectival suffix and the nominalizer are not inflections, but they are derivations. If this observation is correct, then Zwicky's claim that inflectional suffixes appear on the rightmost morpheme cannot be a cross-linguistic phenomenon because the verb of a PN on which the tense suffix appears is not the rightmost morpheme.

Further, aggregatives in Tamil given in 28-29 provide good examples against Zwicky's claim.

28.	ellaam	'all' - non-human/ non-polite
-----	--------	-------------------------------

The case markers are attached not to the right-most morpheme of these words, but to the one before -um. e.g.

- 30 a. *ellaa-tt-ukk-um*
 all/OBL-DAT-INCL
 To all
- b. *ellaa-tt-ilay-um*
 all-OBL-LOC-INCL
 In all

- 31 a. *ellaar-ukk-um*
 all-DAT-INCL
 To all
- b. *ellaar-ilay-um*
 all-LOC-INCL
 In all

According to Zwicky's criterion *ellaa* in these examples seems to be the head since it is the morphosyntactic locus. Yet in larger constructions case is assigned not to *ellaa*, but to the noun phrase that follows.

32. *ellaa nalla aalu-nkal-ukk-um*
 all good person-PL-DAT-INCL
 To all good people

The NP in 32 also exemplifies that once the morphosyntactic locus is taken to be the head, *aalu* and the plural marker *-nkal* can also be argued to be heads. Nevertheless, none of these is the rightmost morpheme of the structure. This shows Zwicky's very criterion of head is contradictory. Fifth and most importantly, in the present work both inflectional and derivational suffixes have been assumed to be FCs, based on the fact that they have selectional properties. If this is correct it indicates that words can be formed in the syntax applying syntactic rules to lexical and functional heads. When lexical and functional heads are taken to be syntactic, then only the irregular, idiosyncratic forms are left to the lexicon. The implication of this argument is that word formation is not a part of the

lexicon, contra to the Lexicalist Hypothesis. Once word formation is excluded from the lexicon, the notion 'head' does not play a significant role in the lexicon. Thus, 'head' becomes a notion related only to syntax.

To summarize, this chapter so far has sketched several theoretical issues such as the X-bar theory, the dichotomy between the lexical and functional categories, the nature of lexical representation in the lexicon and the notion 'Head'. Before proceeding further, these theoretical assumptions are tested applying them to the adjectival and adverbial suffixes next. This section also introduces another theoretical issue, namely, licensing.

3.5. The functional category approach and the adjectives and adverbs in Tamil

In Tamil, adjectives are of three types. Adjectival participles, given in 5.4.2.1, are formed by attaching *-a* to tensed forms of verbs. Adjectives such as *nalla*, *keTTa* have the adjective suffix *-a*, but the stem forms do not occur independently. Therefore, they must be listed in the lexicon. The third type of adjectives are formed adding *-aana* to nouns. In example 33-34, *-aana* follows *alaku* 'beauty' and *veekam* 'speed'.

- 33. alak-aana pulla
 beauty-ADJ girl
 Beautiful girl

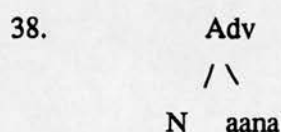
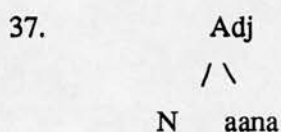
- 34. veekam-aana kaar
 speed-ADJ car
 Fast car

Adverbs in Tamil are generated suffixing *-aa* to nouns.

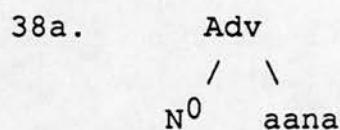
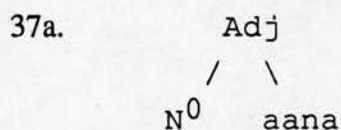
- 35. veekam-aa ooTu.
 speed-ADV run
 Run fast.

- 36. alak-aa iru.
 beauty-ADV be/IMP
 Stay beautifully.

The adjectival and adverbial suffixes, *-aana* and *-aa* in 33-36 can only be attached to nouns. This behaviour of these suffixes is consistent with the properties of FCs, namely the selectional property. Therefore, invoking characteristics of FCs given in section 3.2, the adjectival and adverbial suffixes are assumed to be functional heads; they are bound morphs; they select nouns as complements; they have a fixed position in a phrase to occur. Thus, they appear in the F-lexicon as functional trees.

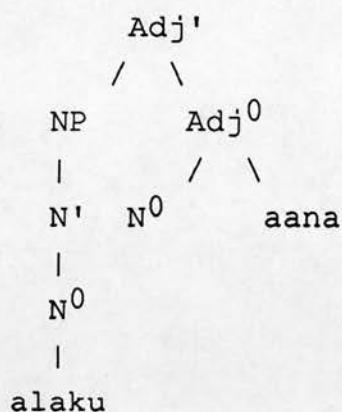


It is noteworthy that these functional trees, though they seem to be binary branching, do not express a sister relationship which is a property of X-bar schema. The simple reason is that the X-bar theory does not function in the lexicon. Yet these binary branching trees in the lexicon denote that the suffix must be attached to a specified stem category. In other words, it shows that a suffix selects a stem category as its complement. The complement of a functional head is different from that of a lexical one. The complement of a suffix is a X^0 stem form to which the suffix in question must attach, but the complement of a lexical category is a semantically selected XP that relates to a theta position. In order to make this distinction explicit, the complements of functional heads are specified as X^0 s. e.g.



Interestingly, when these functional trees are projected into syntax they observe X-bar theory and appear as X^0 syntactic nodes. They, then, project up to X' levels. In order to satisfy the selectional requirement of the X^0 head in question, a YP, which is categorially compatible with the stem (complement) category of the suffix (= X^0), projects into the syntax and is realized as a sister to X^0 . For example, when the functional tree in 37a is projected into the syntax it is realized as Adj^0 . Subsequently, Adj^0 projects up to Adj' . The functional tree of the adjectival suffix indicates that it selects a noun (as its complement). Therefore, a noun is projected into the syntax, and its maximal projection, i.e. NP, is realized as the sister to Adj^0 . This results in the syntactic tree in 39 for the adjective *alakaana* in 33.

39.



This structure is not well formed as there is a stranded suffix and a N^0 node which is not phonetically realized. It is not acceptable, because it violates the licensing principles. Before discussing a solution to this problem two issues, e.g. licensing and head movements, are worth explaining, as these two will be extensively employed throughout the present work.

3.5.1. Licensing Principle and Head movement

The well-formedness conditions allow elements to appear in a sentence, if and only if, they observe the principles of grammar. In other words, elements in a structure are assumed to be licensed, if and only if, they do not violate any principle of grammar.

The Principle of Full Interpretation (FI) of Chomsky (1986) "... requires that every element of PF and LF, taken to be the interface of syntax (in the broad sense) with systems of language use, must receive an appropriate interpretation - must be licensed in the sense indicated" (p. 98). Thus, at PF all phonetically realized elements must be PF licensed by giving them an appropriate phonetic interpretation. At LF, all maximal and non-maximal projections must be licensed by obeying at least one of the licensing principles. As a result, non-maximal projections, by being the heads of phrasal categories, are licensed by their maximal projections. The maximal projections are licensed by either theta marking or co-indexing. This indicates that operators are bound to variables; predicates are linked to subjects; maximal projections in the argument positions are assigned theta roles by the lexical elements; or else they are co-indexed with an antecedent. Following the FI, Rothstein (1991) formulates a Licensing Principle (LP). It states that "every (terminal and nonterminal) node in a structure must fall within the domain of at least one of a limited set of syntactic principles" (p. 140).

These criteria apply straightforwardly to lexical categories, but they cannot be employed to license functional categories, since the elements in the latter group are not theta role assigners or theta role bearers. This implies that though FCs must properly be licensed to satisfy the requirement of Full Interpretation, the principles proposed do not provide necessary criteria. Thus, licensing principles are problematic to functional categories. One possibility to overcome this difficulty is to assume that the functional heads license themselves if they are not empty or are co-indexed with an antecedent. As cited in Cann (1993a:54), Cann & Tait (1989) and Tait & Cann (1990) formulate this assumption as the PF-Licensing Principle (PFLP). It states,

40. "a must be PF-licensed, where *a* is PF-licensed iff the head of *a* immediately dominates phonetic material or forms part of a PF licensed chain."

The PFLP imposes two major constraint on licensing. The first restriction is that a node must accompany phonetic material in order to be licensed. According to the second half, the PFLP allows empty categories to be licensed if and only if they relate to some phonetically realized categories. In other words, if an empty head is a trace of an antecedent, it respects the PFLP. Thus, this principle dismisses the existence of empty categories and empty syntactic nodes which are not properly licensed at PF. This approach indicates that functional heads must satisfy their complement requirements in the syntax. Hence, stranded affixes are not accepted at PF according to the PFLP. In this regard, this principle is consistent with the Stray Affix Filter of Baker (1988), given in 41.

41. * X if X is a lexical item whose morphological subcategorization frame is not satisfied at S-structure" (P. 140).

Further, the PFLP is compatible with the Head Movement Constraint (HMC) and the Empty Category Principle (ECP). The former hypothesizes that a head category is moved to the X^0 position that governs the maximal projection YP of Y. The latter proposes that an empty category must be properly governed by its antecedent.³²

³². See Baker (1988) and Ouhalla (1989, 1991) for detailed discussions on HMC and ECP. Ouhalla (1989) argues against the HMC proposed in Chomsky (1986) and derives the same effect through ECP. Ouhalla (1991) defines HMC as "A head category can only moved to the head position immediately preceding it" (p. 43). Baker (1988:53-59) also bears similar opinion.

During the syntactic derivation a head, *Y*, is moved to the X^0 position of the immediately dominating category in order to satisfy the PFLP. This allows the moved element to M-command, defined in 42, and hence to govern the trace that it has left behind.

42. *a* M-commands *b* iff *a* does not dominate *b* and every maximal projection *y* that dominates *a* dominates *b*.

In this context, the notion 'government' refers to chain coindexing whereby the antecedent M-commands and chain governs the trace.³³ In this way, the PFLP provides means for licensing syntactic positions by head movements.

These remarks so far have shown how morphological categories are licensed in syntax to fulfil the requirements of Full Interpretation. This discussion, however, has taken into account only the monomorphemic morphological categories. Nevertheless, there are morphs in natural languages which are syncretized forms of several morphemes. Thus, before proceeding further the mechanism in which multimorphemic forms or syncretized morphs are licensed must be addressed.

One of the significant assumptions in the functional category approach to morphology is the correlation between syntactic structures and morphological properties. Thus, on the one hand, as exemplified in Ouhalla (1991), Iatridou (1990), syntactic structures are taken to be the reflection of the morphological properties of words. On the other hand, this indicates that morphemes must properly be licensed in the syntax. The syncretized morphs are rather problematic to this approach because in these cases, one morph represents several morphemes. As far as licensing is concerned, there are two possibilities to overcome this difficulty. The first is to hypothesize that syncretized syntactic nodes are compatible with the properties of the morphs in question. This approach may apply to some cases, but it may result in many arbitrary syntactic nodes such as Tense Phrase (TP), Agreement Phrase (AgrP), Finite Phrase (FP), Agreement + Tense Phrase (AgrTP), Agreement + Finite Phrase (AgrFP) and so on if the language in question has monomorphemic morphs as well as syncretized morphs, and if the latter kind of morph contains some of the morphemes realized in monomorphemic morphs. This then indicates that assuming the existence of syncretized syntactic nodes in a tree is not desirable. Alternatively, morphs can license their properties by allowing the syncretized morphemes to head their maximal projections. This hypothesis does not require the same

33. For some discussion on these issues, see Tait (1991:255).

category to be realized in two (or many) different nodes, and hence, is economical. This is what I call the Morpheme Licensing Hypothesis (MLH).

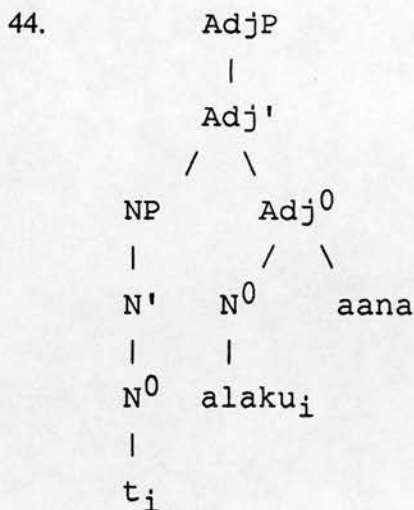
43. The morphemes of a syncretized morph must head their maximal projections in order to receive Full Interpretation.³⁴

I will now go on to employ the MLH together with the PFLP to explore morphosyntactic properties in Tamil.

3.5.2. Derivation of adjectives

Turning back to the tree in 39, it is obvious that the tree violates the PFLP as there is an empty X^0 node. Also, the suffix cannot be properly licensed unless it is attached to a stem form to satisfy the complement requirement. Therefore, the noun *alaku* is raised to the empty N^0 position of the Adj^0 , leaving a trace in N^0 . The movement of the noun to the N^0 complement position of Adj^0 exemplifies two aspects of head movement. First, N^0 is moved to a node that is categorially compatible. second, it substitutes for an empty node. Therefore, this derivation is assumed to be an instance of substitution, rather than adjunction, because the moved element replaces the empty N^0 category. Further, it shows that substitution applies only for a categorially compatible lexical or functional node. The resulting form is well formed as it has licensed every node in the structure and has satisfied the complement requirement of the functional (suffixal) head locally. As exemplified in 44, the noun *alaku* has filled the empty N^0 at first place, and secondly, this noun is co-indexed with its trace forming a proper chain.

³⁴. For an illustration of this hypothesis see 4.4.4.



To summarize, this section has illustrated the derivation of an adjectival form assuming the adjectival suffix is a functional category. When a functional category appears in syntax it forms the syntactic structure based on the complement selectional properties of the functional head. Thus generated syntactic trees observe licensing principles and undergo head movements. This results in well formed syntactic structures. Derivation of adverbs is not illustrated separately, as it is similar to that of adjectives.

3.6. Conclusion

This chapter has illustrated several theoretical assumptions. First, having assumed a version of the Principle and Parameters framework, the X-bar theoretic notions were described. Secondly, the nature and the properties of functional categories were discussed in detail. These two categories are assumed to be in two different lexica, the C-lexicon and the F-lexicon. The former consists mainly of encyclopaedic information whereas the latter contains grammatical ones. Subsequently, the notion 'Head' was briefly discussed and it was concluded that this notion is only relevant to the syntax as no distinction is made between inflectional and derivational suffixes. Finally, these assumptions were tested applying them to the adjectival suffix to form an adjective.

So far I have explained the necessary theoretical approach that may suffice for a syntactic analysis of the morphological categories in Tamil. Thus, the next chapter and the subsequent chapters are devoted to expanding the analysis given in 3.5.

Chapter 4

Verbal Morphology in Tamil

4.0. Introduction

Complex words in Tamil, both verbal and nominal, may consist of several morphemes. It was noted in 2.1 that Inflected nouns have a noun stem and (one or more of the) suffixes indicating number, gender and case. An inflected verb may include either tense and agreement suffixes or a finite suffix. This complexity is shown in example 1-2 of chapter 2, repeated here as 1-2.

1. **tampi-maar-kal-ukku**
 brother-POLITE-PL-DAT
 For the brothers,

2. **(naan) poo-r-een.**
 I go-PRES-1/SG
 I go.

These words, as discussed in chapter 2, can be analyzed in two ways. One possibility is to view them as single lexical elements without relating them to larger units in the language. The researchers in favour of this approach consider word-formation as a lexical process and examine how words are generated by affixation.

Alternatively, word-morphology can be treated as a syntactic relationship. One way of showing this interaction between words and the constituents above the word level is to apply syntactic rules for generating words. As mentioned in 3.0, this model has two major advantages over the Lexicalist Hypothesis. First, deriving words according to syntactic principles shows the relationship between word structure and syntactic structure.

Second, this model provides a means of identifying possible and impossible (in other words, grammatical and ungrammatical) structures in a principled way.

These two lines of research were described in 2.3, and a hypothesis in favour of syntactic approach of word-formation was outlined in chapter 3. This proposal is based on two assumptions:

- A. All affixal categories are functional heads; and
- B. They organize the syntactic structure based on selectional properties.

Exploiting these two hypotheses, verbal morphology is explored in this chapter and in chapters 5 and 6.

4.1. Verbal morphology

Verbal forms in Tamil constitute a part of either finite or non-finite clauses. The finite clauses can occur independently, and are able to express complete acts, events, and situations. They, unlike those of non-finite clauses, can precede complementizers. e.g.

3. *tampi varu-v-aar-oo*
brother come/OBL-FUTURE-3/SG/HP-DUBAT
teri-y-a-(i)l-a(y).
know-y-INFN-not to be-FN
I do not know whether my brother will come.

4. *en-akku ippaTi naTa-kk-um*
I/OBL-DAT this way happen-kk-3/SG/NEUTER/FUTURE
nu nenay-kk-a muTi-y-aat-u.
COMP think-kk-INFN can-y-NEG/TENSE-FN
I cannot think of happening this to me.

5. *raajaa-v-ukku nalla veela muTi-y-um nu teri-y-um.*
Raja-v-DAT good work can-y-FN COMP know-y-FN
I know that Raja can do good work
(he is a good worker).

6. * tampl var-a-oo teri-y-a-ll-a(y).
 brother come/OBL-INFN-DUBAT know-y-INFN-not to be-FN
 I do not know whether my brother will come.

7. * en-akku ippaTi naTa-ntu nu
 I/OBL-DAT this way happen-PART COMP
 nenay-kk-a muTi-y-aat-u.
 think-kk-INFN can-y-NEG/TENSE-FN
 ? I cannot think of having this happened to me.
 (lit.) I cannot think that this would happen to me.

The verbal forms in these clauses have a verb with a finite suffix, e.g. *-um*, *-ay*, *-u*, or an agreement suffix, given in 4.2.¹ The agreement and finite suffixes have complementary distribution in that they never occur in the same clause. The agreement suffixes, with some exceptions, follow tense suffixes, the defective and indicative main verbs. Yet the finite suffixes attach to negative and modal verbs.² These two types of suffixes are dissimilar in another respect as well. The agreement suffixes always imply finiteness, but the finite suffixes do not agree with the subject noun of the sentence where they occur. This results in the following combinations for the finite clauses.

8. [+AGR, +FINITE]
 [-AGR, +FINITE]
 but,
 * [+AGR, -FINITE]

1. I will discuss the finite suffixes in chapter 5.

2. There also exist finite sentences with no (or omitted) verbal forms. They are predicative phrases which have either two nouns or a predicate nominal. e.g.

- i. avar aaciriyar.
 he teacher
 He is a teacher.

- ii. en-akku inippu viruppam.
 I/OBL-DAT sweets like (desire)
 I like sweets.

Thus, they can be called verbless finite sentences. I do not go into a detail discussion on them at present since they are not morphologically marked.

Non-finite clauses such as infinitives, participles, conditionals and concessional indicate neither finiteness nor agreement. Thus, they have [-FINITE, -AGR] properties and are embedded in main clauses.

Finite clauses, unlike non-finite ones, also denote time reference. Tense suffixes in finite clauses precede agreement suffixes, but they are never realized before finite suffixes. Non-finite clauses may consist of lexically specified tense suffixes, but they do not indicate time reference. For example, conditional and concessional forms contain past tense suffixes, but they do not receive a past tense interpretation. On the contrary, adjectival participles contain tense suffixes and convey time reference. These variations result in three types of finite clauses (a, b, c, in 9) and three types of non-finite clauses (d, e, f in 9).

9 a. verb + [+FINITE, -AGR]	=	teri-y-um know-y-FN know
b. verb, [+AGR, +FINITE]	=	var-um come/ OBL-3/SG/NEUTER/FUTURE will come
c. verb, [TENSE, [+AGR, +FINITE]]	=	poo-r-een go-PRES-1/SG I go.
d. verb, [TENSE, CONDITIONAL]	=	va-nt-aal come-PAST-COND Having come
e. verb, TENSE, ADJECTIVE	=	va-nt-a come-PAST-ADJ
f. verb, [-FINITE (infinitive)]	=	var-a come/OBL-INFN To come.

These examples show that the verbal forms in Tamil have a number of combinations, and are morphologically complex. They are examined in this chapter and in the following two chapters. This chapter is devoted to analyzing tense and agreement; chapter 5 discusses the morphosyntactic behaviour of the negatives, finite and non-finite suffixes; chapter 6

subsequently describes characteristics of verbs. Each of these chapters consists of a rather descriptive account followed by an analysis of the syntactic behaviour of the relevant morphological categories.

Examples 1 and 2 show that both verbal and nominal forms are rich in morphology. So one may wonder why our attention focuses on verbal morphology, but not on nominal morphology. There are two reasons for analyzing verbal forms prior to nominal ones. One reasoning is that verbal forms in Tamil are morphologically richer and more complex than nominals, and provide a good research field. More importantly, an analysis of verbal morphology can easily be expanded into nominal morphology. Thus, an examination of verbal morphology provides the background for an analysis of deverbal nouns, e.g. GNs and PNs.

I will move on to a discussion of agreement and tense suffixes in the next section to expand the theoretical approach outlined in chapter 3.

4.2. Agreement

The agreement markers are portmanteau morphs of person, number and gender morphemes. Thus, the features of the subject of a sentence must be compatible with those of agreement. In 10, these suffixes are attached to *aaTu* 'dance', and *vaa* 'come' and are given their properties together with the relevant subject pronouns. *var* is the oblique base of *vaa* and *-ir* is the present tense suffix.

10.	Specifications	Pronoun	Gloss	V-TENSE-AGR
	1, SG	naan	I	aaTu-ir-een
	1, PL -exclusive	naanka		
	-inclusive	namma/naama	we	aaTu-ir-oom
	2, SG non-polite	nii	you	aaTu-ir-a, iya
	2, SG polite	nii	you	aaTu-a-um
	2, SG/PL polite	niinka	you	aaTu-ir-iinka
	3, SG MAS polite	avar	he	aaTu-ir-aar
	3, SG MAS non-polite	avan	he	aaTu-ir-aan
	3, PL MAS non-polite	avanunka	they	aaTu-ir-aanunka
	3, SG FEM non-polite	ava(l)	she	aaTu-ir-aa(l)
	3, SG polite	avunka	she	aaTu-ir-aanka
	3, PL polite	avunka	they	aaTu-ir-aanka
	SG impersonal ³	atu	it	aaTu-ir-atu ⁴
	3, SG Neuter	atu	it	aaTu-utu ⁵
	3, PL Neuter	atuka	they	var-utu-ka -children, animals.
	3, PL	atunka	they,	aaTu-ir-aanka - non-human

Some agreement markers in this chart have alternative forms. Some others agree with nouns which are not noted above. *naanka* and *naama/namma*, for example, are respectively exclusive and inclusive forms of the first person plural pronoun. They may occur with the alternative agreement suffix *-am*.⁶

11. naama poo-r-am.
we (INCL) go-PRES-1/PL
We go.

3. See example 21 below.

4. *-atu* and *-utu* are the third person, neuter agreement suffixes in IT and JT respectively. The presence of both suffixes in ET shows that the latter (ET) has been influenced by JT.

5. In the past tense *-atu* occurs in this context.

6. *-am* occurs in the Jaffna dialect of Tamil. See Gair et. al. (1978:87).

Further, the second person (inferior) suffix *-a* can also accompany the oblique base of verbs and expresses a command or wish.⁷

12. (nii) poo-k-a.
you go-k-2/SG
May you go.
13. (nii) vaaci-kk-a.
you read-kk-2/SG
May you read.

In the second person singular and plural, rarely *-iya*, which is an alternative form to *-iinkal*, the second person, plural suffix, is found.⁸ This suffix may also imply a command or wish.

14. nii caa-kir-*iya*.
you die-reflexive-2/SG
May you die.
15. niinka ankee poo-n-*iyal-aa?*
you there go-PAST-2/SG~PL-Q
Did you go there.

Furthermore, agreement suffixes in the third person have a variety of collocations. The quantifier subjects *ellaam* and *ellaarum* agree with the third person plural suffix *-aanka*.

16. *ellaam/ellaarum iru-pp-aanka*.
All be-FUTURE-3/PL
All are (there).

Quantifiers such as *yaarum* 'everyone', *yaaroo* 'somebody', *yaaraavatu* 'somebody or other' require the third person agreement suffixes.

7. The oblique base form is formed by adding *-kk* to the verbs in Class 1.

8. *-iyal* occurs in Jaffna Tamil (Gair et. al. (1978:183)).

17. yaarum⁹ varu-v-aanka.
 everybody come/OBL-FUTURE-3/PL
 Everybody will come.
18. yaaroo va-ntu-iru-nt-aaru.
 Somebody come-PART-be-PAST-3/SG/HP
 Somebody had come.
19. yaaroo va-nt-aanka.
 somebody come-PAST-3/PL
 Somebody (unknown) people came.

-aanka also appears in sentences with co-ordinated nouns.

20. taay-um takappan-um cet-tu poo-n-aanka.
 mother-CON father-CON die-PART go-PAST-3/PL
 The mother and the father died.

Another important characteristic of ET is that the impersonal suffix *-atu* occurs with all three persons in both singular and plural.^{10,11}

⁹. In both *yaarum* and *yaaroo*, *-um* and *-oo* are respectively the aggregative marker (see chapter 3) and the dubitative marker. Thus,

- i yaar-um
 who-Aggregative.
 All who's = all (unspecified) people = everyone.
- ii yaar-oo
 who-dubitative
 someone-unknown.

¹⁰. The grammars of Tamil, Arden (1942), Asher (1982:174), Lehmann (1989:59) for example, identify *-atu* as the third person neuter form. Yet, none of these dialects are reported to have the impersonal usage of *-atu*. Thus, this particular instance of ET can be treated as a piece of evidence to show that the language is a result of dialect mixture. Subrahmanyam (1971:419) reports that in south Dravidian languages, such as Telugu, KonDa, Pengo, Naiki and Kurux-malto, the third person non-masculine (neuter) singular form is *-at*. It can be imagined, then, that some speakers familiar with these languages may have mixed with people in tea estates in Sri Lanka. This may have resulted in this particular use of *-atu* in ET.

21.	naan	}	I	
	naanka		we	
	nii		you	
	niinka		you	atu itu collu-r-atu
	atu		she	that this say-PRES-3/SG/IMPER
	avunka		they	(X say(s) nonsense.
	avar		he	
	avan		he	

One may argue that *-atu* in example 21 is a non-agreement marker since it does not distinguish person or number. A close look at it would show, however, that it has very loose selectional properties. The *-atu* form is less likely to occur with third person neuter subject nouns, especially with irrational nouns like *naay* 'dog'. Hence, the ungrammaticality of the sentence in 22.

22. * *naay poo-r-atu.*
 dog go-PRES-3/SG/IMPER
 The dog goes.

23. *naay poo-k-utu*
 dog go-k-3/SG/NEUTER/PRES
 The dog goes.

It is noteworthy that the agreement suffixes given in 10, except *-utu*, the third person, singular, neuter form, are common to all three tenses. *-atu/-icci*, and *-um* are respectively used in the past and future tenses in the context of *-utu*. *-(i)cci* requires nouns denoting women, children and animals as the subject, and is glossed as *icci*.¹²

24. *een ammaa peecu-n-icci.*
 why mother scold-PAST-icci
 Why did the mother scold you?
 (Why did the mother shout at you?)

11. This particular behaviour of *-atu* is restricted to present tense only. I have not encountered any other instance where *-atu* is used as a neuter agreement marker.

12. See Asher (1982:173) for a dialectal difference.

25. palam palat-t-icci.
fruit ripe-PAST-icci
The fruit ripened.
26. naay ull-ukku var-um.
dog inside-DAT come/OBL-3/SG/NEUTER/FUTURE
The dog will come into (the place).

In addition to these collocational restrictions, some agreement suffixes have contextual information as well.¹³ It is evident from the chart in 10 that the second and third persons have a number of forms to express politeness and non-politeness. The second person singular polite suffix *-um* is less frequently used to refer to equals or inferiors.¹⁴ Particularly, it occurs in business type conversations, i.e. between master (e.g. a supervisor or other authorities in an estate) and a labourer (coolie). In these conversations neither politeness nor inferiority is implied or expected from the authorities. To express semi-politeness, *-um* combines with the second person inferior (= imperative) form of the verb.

27. nii po-k-a-v-um.
you go-k-2/SG-v-SPOLITE
(you may) go (not inferior or superior).

The third person plural suffix *-aanka* provides another example in this regard. As it is obvious from 10, it is used with singular feminine nouns to express politeness. In the same context, the third person singular honorific *-aar* also indicates politeness.

28. coomaa paTi-kk-ir-aar.
Soma study-kk-PRES-3/SG/HP
Soma studies.

13. See Pollard & Sag (1994, particularly chapter 2) for a discussion of this issue. They discuss a similar phenomenon referring to data from English, Korean and Japanese.

14. *-um* appears in some IT dialects. For details see Asher (1982:180).

29. ammaa eec-i-T-T-aanka.
 Mother blame-PART-leave-PAST-3/PL/HP
 Mother scolded (x).

Further, the third person neuter suffix *-utu* has a variety of uses. It takes nouns that refer to children and non-human subjects and shows inferiority and irrationality. It also expresses familiarity and close association. In this context, nouns referring to females, such as *ammaa* 'mother', *tankacci* 'sister', with whom one may have a close (family) relationship, are realized as the subject of the sentence, and number is distinguished optionally.¹⁵ e.g.

30. ammaa var-utu.
 mother come/OBL-3/SG/NEUTER/PRES
 The mother comes.
31. pulla poo-k-utu.
 girl go-k-3/SG/NEUTER/PRES
 The girl goes.
32. pullay-nka paTi-kk-utu.
 girl-PL study-kk-3/SG/NEUTER/PRES
 The girls study.
33. naay/naay-ka kolay-kk-utu.
 dog/dog-PL bark-kk-3/SG/NEUTER/PRES
 The dog/s bark/s.

In the same environment *-icci* appears if the action was performed or the event took place in the past. *-icci* also implies suddenness, unexpectedness, accident as in 35. It is noteworthy that this suffix does not appear in a sentence which has a subject noun in the plural or when the noun implies politeness. Thus, 36 is ungrammatical. On the contrary, 37 shows that if the plural noun does not indicate politeness or concern, then, *-icci* agrees with the subject.

15. It seems that the rather confusing behaviour of the third person, neuter form is a result of dialect mixture. so, some speakers use number in this environment whereas others do not recognize such a distinction.

34. raani velak-in-icci.
Rani give up-PAST-icci
Rani gave up (X).
35. ennamoo vilu-nt-icci.
something fall-PAST-icci
Something fell down.
36. * ammaa-maaru-ka kuTi-cc-icci.
mother-polite-PL drink-PAST-icci
The mothers drank (x).
37. pullay-inka tanni kuTi-cc-icci.
girl-PL water drink-PAST-icci.
The girls drank water.

In some instances, *-unkal*, a variant of *-iinkal*, the second person agreement suffix, follows agreement suffixes to imply politeness towards the addressee. In 38, *-unkal* appears after the agreement suffix *-aar* to indicate politeness.

38. appaa cokam-aa iru-kk-aar-unkal-aa?¹⁶
father well-ADV be-kk-3/SG/HP-POLITE-Q
How is your father?
(lit. Is father in good health?)

Moreover, example 22 shows that *-atu* does not occur with irrational (and non-human) nouns such as *naay* 'dog'. Surprisingly, this observation is not always true. In 39a-b, both *-atu* and *-utu* agree with *naay*.

- 39 a. naay kolay-kk-utu.
dog bark-kk-3/SG/NEUTER/PRES
The dog barks.

¹⁶. It is interesting to note that the gloss of this sentence contains two instances of 'polite'. The inner one refers to the third party, in this case 'the father', and the outer one is attributed to the addressee.

- b. naay kolay-kk-ir-atu.
 dog bark-kk-PRES-3/SG/IMPER
 The dog barks.

It is noteworthy that acceptability of these two sentences does not reject the previous observation. This particular behaviour of the agreement suffixes exemplifies that they contain contextual information. Thus, exploiting one of the suffixes, *-atu* or *-utu*, depends on the speakers attitudes towards the neuter subject, in this case 'dog'. If the speaker considers the irrational subject intimately or affectionately, he may use *-atu* rather than *-utu*. Pollard and Sag (1994:67-84) observe a similar characteristic in English pronouns. They point out that according to the Pragmatic Principles of English a male dog can be referred to by both *he* and *it* even in the same discourse. *He* substitutes *dog* when familiarity or affection is implied, otherwise *it* occurs in this context.

40. That dog is so stupid, every time I see it I want to kick it. He's a damned good hunter though.¹⁷

These observations show that the agreement suffixes in Tamil have not only [+AGR] features, but also contextual and pragmatic information.

To summarize, this section has illustrated the properties and the behaviour of agreement suffixes in Tamil. These suffixes carry not only person, number, gender features, but also they express contextual information such as politeness, non-politeness, intimacy, affection, inferiority and superiority. Another characteristic of the agreement suffixes is that they almost always attach to tense suffixes. In the next section, tense is discussed prior to an analysis of the syntactic behaviour of agreement and tense.

4.3. Tense

(Estate) Tamil distinguishes three tenses, namely, past, present and future which are morphologically marked.¹⁸ The tense forms are as follows.

17. This example is due to Pollard and Sag (1994). In their account, this example comes under 32.

18. Some researchers (Christdas (1988:415)) accounted for only two tenses in Tamil, namely, past and non-past as the present tense suffix indicates present and future time references as well as habitual actions. Steever (1993:168) also points out that only two simple affirmative tenses, past and non-past, can be reconstructed to Proto-Dravidian.

41. present tense: *ir*
past tense: *nt, t, in, nc, T, (nT)*
future tense: *p*

It must be noted that traditional Tamil grammarians as well as modern researchers of Tamil have identified *-kir* (or *-kkir*), as the present tense marker¹⁹. This assumption is questionable based on two observations: firstly, *-k* (or *-kk*) is seen even in non-tensed verbal forms. It appears before the imperative (non-polite) marker *-a* (42), the infinitive marker *-a* (43), the negative suffix *-aat-* (44).

42. PaTi-kk-a.
study-kk-IMP
Do study.
43. PaTi-kk-a
study-kk-INFN
To study
44. PaTi-kk-aat-a
study-kk-NEG/TENSE-ADJ
Not studying

In these cases, there is no evidence for claiming that *k* has tense properties or interpretations.

Secondly, if *-kir* is considered to be the present tense marker, there must be some explanation for the fact that some verbs, which are generally called weak verbs, do not have the *-kir* suffix, but *-ir* or *-r*. One can argue that both strong and weak verbs precede the present tense suffix *-ir* and that the present tense formative *-k* of the *-kir* indicates the class of verb. Or else, it could be the case, as Steever (1993:179) assumes, that *-r* is the reduced form of *-kir*. This could be true, but still there must be some explanation for the fact that *-kir* appears with the strong verbs, but *-ir* or *-r* combines with the weak verbs. Therefore, I consider *-ir* to be the present tense suffix.

¹⁹. See Lehmann (1989:59), Asher (1982:267), Arden (1942: section 256) for more detail.

Once *-ir* is assumed to be the present tense suffix, *-k* or *-kk*, that precedes *-ir*, requires an explanation. Lehmann (1989) assumes *k* (or *kk*) is a semantically empty augmented phoneme(s) and proposes to insert it between the verbs and suffixes. Accordingly, based on the occurrence of *-k*, *-kk*, or *-0* (= zero suffix), he classifies verbs into three groups: strong verbs with *kk*, middle verbs with *k*, and weak verbs with zero *k* formative. e.g.

45. paTi-kk-a
studdy-kk-INFN
To study

46. keek-k-a
ask-k-INFN
To ask

47. ceer-a
join-INFN
To join

It seems that Lehmann assumes that the present tense marker is *-ir* as he (ibid. 53) suggests to insert *-kk* or *-k* before a vowel initial agreement suffix. Nevertheless, when he goes on to describe tense he does not observe his own proposal and considers *-kkir* or *-kir* to be the present tense markers. This results in a contradiction in Lehmann's account.

Christdas (1988:422-424) considers that the distinction between the strong and weak verbs is related to the stem concerned, but not to the tense formatives. She proposes that there is an extra skeletal in the syllable structure of 'strong' verbs, but not in weak verbs. Assuming *-k* to be the present tense formative, she expands it to fill the empty C-slot of the syllable structure of the strong verbs. According to her analysis, the formation of the present tense verbal form is as follows.

48.	CVCVCCVC	>	CVCVCCVC
			\
	p a T i - k i r		p a T i k k i r

Accordingly, she gives three surface forms, *-kk*, *-k*, *-0* (zero) for the formative *-k*. Yet she does not discuss the forms such as negatives, imperatives and infinitives where there is a *k*

formative without tense implication. These instances are problematic for Christdas' approach and undermine her thesis. Therefore, I am inclined to think *-ir* to be the present tense suffix. *-k* (or *-kk*) of an inflected strong verb is considered to be a semantically empty phonological element.

However, one of the insights expressed in Christdas (ibid), that is, strong verbs have an extra skeletal slot, is retained further, as an important characteristic of verbs. Christdas exemplifies her assumption through verb inflection. Her hypothesis can further be supported by deverbal nominals in Tamil as well.

49.	cey-tal do-GNOML/tal	>	caytal doing
50.	cey-kai do-VNOML	>	ceykai doing
51.	paTi-tal study-GNOML/tal	>	paTittal studying
52.	paTi-kai study-VNOML	>	paTikkai studying

In 49-50, the initial consonants of the suffixes do not geminate, but those in 51-52 do. These examples show that the distinction is related to some particular behaviour of the verbs. It can be explained assuming that strong verbs have an extra skeletal slot to which the initial consonant of a suffix spreads. The initial consonant of the suffixes that follows weak verbs do not double as these verbs do not have a syllable structure similar to those of strong verbs.

4.3.1. Tense formation

Tensed verbs are formed by adding the tense suffixes either to the stems of weak verbs or to the oblique base forms of verbs. Stems are the bare verb forms with no added suffixes. Oblique base forms are of two types. Some consist of a verb stem and the augmented *-k*, or *-kk*, and others may have a lexically specified form of a verb as the oblique base. Thus,

paTi 'study' and *vaa* 'come' are stem forms and *paTikk* and *var* are oblique forms.²⁰ e.g.

53. *paTi-kk-ir-aar*.
study-kk-PRES-3/SG/HP
(He) studies.

54. *eluTu-ir-aar*.
write-PRES-3/SG/HP
(He) writes.

The allomorph *-r* is attached to *poo* 'go', *taa* 'give', *vaa* 'come'.

55.	Verb	Gloss	V-Tense-Agr
	<i>poo</i>	go	<i>poo-r-aar</i>
	<i>taa</i>	give	<i>taa-r-aar</i>
	<i>vaa</i>	come	<i>vaa-r-aar</i>

Compared to the other two tenses, future tense formation is simple. For generating future tense forms, either *-pp* or *-v*, depending on the syllable structure of a verb, is added to a verb stem or oblique base. The verbs which receive augmented *-k* in the present tense have *-pp* and the others are assigned *-v*.²¹ With regard to *taa* and *vaa*, a future tense suffix is attached to the oblique base forms *tar* and *var*.

56.	verb	Underlying form	Surface form
	<i>paTi</i>	<i>paTi-p</i>	<i>paTi-pp-aar</i>
	<i>naTa</i>	<i>naTa-p</i>	<i>naTa-pp-aar</i>
	<i>cey</i>	<i>cey-v</i>	<i>cey-v-aar</i>
	<i>taa</i>	<i>taru-v</i> ²²	<i>taru-v-aar</i>
	<i>vaa</i>	<i>varu-v</i>	<i>varu-v-aar</i>

²⁰. Later in this section I will present a classification of verbs.

²¹. See Christdas (1988) for a detailed account of this disparity. I agree with her that *pp* and *v* are the allomorphs of the future tense morpheme.

²². *-u* in *taru* and *varu* is an epenthetic vowel.

Past tense forms are generated by adding the past tense markers to verb stems. Their formation seems to be rather complex due to the allomorphic variations of the tense morpheme. The chart in 57 shows some of these suffixes in the inflected verb forms. *taa* and *vaa* have *ta* and *va* forms to add to a past tense marker.

57.	verb	gloss	V-PAST-AGR
	paTi	study	paTi-cc-aar
	naTa	walk	naTa-nt-aar
	vaa	come	va-nt-aar
	taa	give	ta-nt-aar
	kaan	show	kan-T-aar
	keel	ask	keel-T-aar
	alu	cry	alu-t-aar
	paar	look	paa(r)-t-aar
	vil	sell	vil-t-aar
	elutu	write	elut(u)-in-aar
	kol	kill	kol-n-aar
	poo	go	poo-n-aar
	cey	do	cey-nc-aar

Despite allomorphic variations of the past tense forms, shown in 57, several attempts have been made to accommodate their regularities. Asher (1966), for example, classifies verbs in Spoken Tamil based on the phonological features, both phonematics and prosodic, of the 'stem'. He classifies verbs into two, subdivides them into Y-prosodic (verbs ending with front vowels) and W-prosodic (verbs ending with back vowels), and assigns the following tense suffixes to each category.²³

58.		Class i	Class ii
	Y-prosodic	cc	nc
	W-prosodic	tt, TT, nt	t, nt, T, an

Asher (1982:177-178) suggests a similar account where suffixes *-tt* (or *-cc*) and *-nt* for the class i and *-an* (*in*, *-n*) and *-t*, *-nt*, *-nc*, *-T* for the class ii.

23. All grammarians have recognized two types of verbs and have called them strong and weak.

59.	verb	gloss	present	past	future
	paTi	study	paTi-kk-ir-een	paTi-cc-een	paTi-pp-een
	naTa	walk	naTa-kk-ir-een	naTa-nt-een	naTa-pp-een
	aaTu	dance	aaTu-r-een	aaT-in-een	aaTu-v-een
	vaanku	buy	vaank-ir-een	vaank-in-een	vaanku-v-een
	cey	do	cey-y-ir-een	ce-nc-een	cey-v-een
	vil	sell	vi-kk-ir-een	vi-tt-een	vi-pp-een
	keel	ask	kee-kk-ir-een	kee-TT-een	kee-pp-een

Classifying verbs in Tamil into two groups is significant since it simplifies the complexities related to the application of the tense suffixes. Thus, following Asher (1966, 1982), the past tense suffixes in ET are grouped under class i and ii as shown in 60.

60. Class i: -t, -nt, (-T, -nT)
Class ii: -nc, -T, -nt, -in, (-t)

These suffixes emerge in the following contexts.

Class i: -t has two allomorphs; -t and -c. -c occurs in a verb ending with -i or -ay.²⁴ e.g.

61.	Verb	Gloss	Past
	aTi	hit	aTi-cc-aan
	muTi	finish	muTi-cc-aan
	vay	keep	va-cc-aan
	oTay	break	oTay-cc-aan

²⁴. Gemination of -c in these verb forms is due to the extra skeletal of the verb.

-*t* appears after verb final -*u* or -*r*.²⁵

62.	Verb	Gloss	Past
	koTu	give	koTu-tt-aan

-*nt* is seen after an -*a* final verb and *iru* 'be'.

63.	Verb	Gloss	Past
	naTa	walk	naTa-nt-aan

-*T* and -*nT* are confined only to a few verbs and are lexically specified. e.g.

64.	Verb	Gloss	Past
	keel	ask	keeT-T- <i>een</i>
	kaan	see	kan-T- <i>een</i>
	nil	stay	nin-T- <i>een</i>

Class ii: -*nc* is attached to a verb final -*i*, -*ay* or -*y*.²⁶

65.	Verb	Gloss	Past
	cey	do	ce-nc-aan
	muTi	end	muTi-nc-utu

25. Subrahmanyam (1971: 211-213) proposes -*tt* as the past tense suffix for *keel* 'ask' and points out that -*tt* becomes -*TT* in the context of *L*. (See Asher (1966:22-23) and foot note 22 there). Yet the past tense form of *keel* is assumed to be lexically specified, because in ET no distinction is made in laterals. Thus, the rule suggested by Subrahmanyam is not applicable in ET.

26. Historically -*nc* could be the result of applying -*t* or -*nt* to -*i* or -*y* final stems. So,
 cey 'do' cey-t-aan > cen-t-aan; or
 cey-nt-aan > ce-nt-aan.

This assumption is supported by the fact that in literary Tamil the past tense forms of *cey* 'do' and *uTai* 'break' are *ceytaan* and *uTayntaan*. See Subrahmanyam (1971:200-201).

-nt is found in two contexts. (a) Verbs with final *-l* or *-lu* preceded by a short front vowel or a long back vowel. *vaa* and *taa* are also included in this group. (b) verbs with final *-r*. e. g.

66.	Verb	Gloss	Past
	vilu	fall	vilu-nt-aan
	ceer	join	cee(r)-nt-aan
	valar	grow	vala(r)-nt-aan
	vaal	live	vaal-nt-aan
	vaa	come	va-nt-aan

-t occurs only with several monosyllabic verbs which have verb final *-l* preceded by a short, non-front vowel.

67.	Verb	Gloss	Past
	alu	cry	alu-t-een

-T follows verbs that have a penultimate *-T* and the syllable structure given in 68. *pooTu* is an exception to this group.

68.	a.	Verb	Gloss	Past
		CV-CV		
		viTu	leave	viT-T-aan
	b.	CVC-CV-CV		
		kumpiTu	worship	kumpiT-T-aan
	c.	CVVC-CV-CV		
		caappiTu	eat	caappiT-T-aan
	d.	CV-CVC-CV-CV		
		payappiTu	fear	payappiT-T-aan
	e.	VC-CV-CV		
		ampuTu	to be included	ampuT-T-aan
	-	pooTu	put	pooT-T-aan
		but,		
		CV-CV-CVV-CV		
		vilayaaTu	play	*vilayaaT-T-aan
				vilayaaT-in-aan

-in has two allomorphs: *-n* and *-in*. *-l* final monosyllabic verbs are attached to *-n*.

69.	Verb	Gloss	Past
	col	say	con-n-aan
	kol	kill	kon-n-een

-in is attached elsewhere.

70.	Verb	Gloss	Past
	aaTu	dance	aaT-in-aan
	teeTu	search	teeT-in-aan
	veTTu	cut	veTT-in-aan
	tiriTu	steal	tiriT-in-aan

This evidence shows that the past tense suffixes are strongly sensitive to the syllable structure or the phonological forms of verbs. Implication of this is that a slight difference of the syllable structure of a verb can affect the selection of tense suffixes. The verbs in 71 exemplify this. These verbs have equal number of syllables, CVC in 71a and CVVC in 71b-c. Nevertheless, 71a has a verb final *-y* and 71b has a long vowel followed by *-r*. As a result, they receive two different tense markers: *-t* and *-nt*. More interestingly, 71b and 71c presumably have exactly the same syllable structure, but they have different tense markings. This particular behaviour of these verbs is related to the syllable structure of the verb. The difference between 71b-c is that 71c has an extra skeletal in the syllable structure, as assumed by Christdas (1988), but 71b does not. Thus, *ceer* in 71c belongs to class i, but *ceer* in 71b is grouped in class ii. This distinction makes them to have different tense suffixes. e.g.

71.	a.	cey
		cey-t-aan
		do-PAST-3/SG/MAS
		he did.

- b. ceer join (IT)
 ceer-nt-aan
 join-PAST-3/SG/MAS
 He joined the party.
- c. ceer join (T)
 ceer-tt-aan
 join-PAST-3/SG/MAS
 He joined somebody to my class.

These examples show that tense morphology in Tamil closely interacts with phonology as well. At present, these issues are not pursued any further since they would take us far beyond the scope of our investigation.

To summarize, this section has described tense suffixes. They were classified into two: the Class i and Class ii, and the contexts where they occur were explained. Accordingly, in the next section, I will go on to analyze the morphosyntactic properties of agreement and tense suffixes.

4.4. Functional approach to agreement and tense

Main verbs in Tamil have been described as inflecting for tense and agreement. Some verbs consist of a verb, tense and agreement suffixes, whereas others contain only a verb and an agreement suffix. For example,

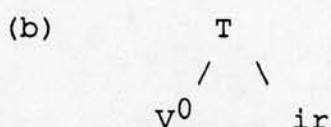
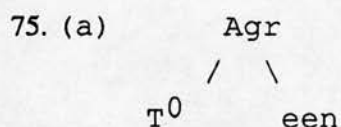
72. annaa paal kuTi-cc-aar.
 brother milk drink-PAST- 3/SG/HP
 (My) brother drank milk.
73. naay poo-k-utu.
 dog go-k-3/SG/NEUTER/PRES
 The dog is going.
74. malay pey-y-um.
 rain rain-y- 3/SG/NEUTER/FUTURE
 It will rain (lit. The rain will rain).

kuTiccaar in 72 has a verb followed by tense and agreement suffixes. Inflected verbs in 73-74 contain a verb and an agreement suffix, e.g. *-utu* and *-um* respectively. These verbal forms indicate time reference although they do not have tense suffixes. Further, these verbal forms denote finiteness as well, regardless of the fact that they do not have overt finite markers. With regard to these observations, two interrelated questions emerge; first, how do these verbal forms receive time references and finite interpretations when the relevant suffixes, i.e. tense suffixes in 73-74 and finite suffixes in 72-74, are not present? Second, what are the properties of tense and agreement suffixes? These issues are the subjects of the analysis presented next.

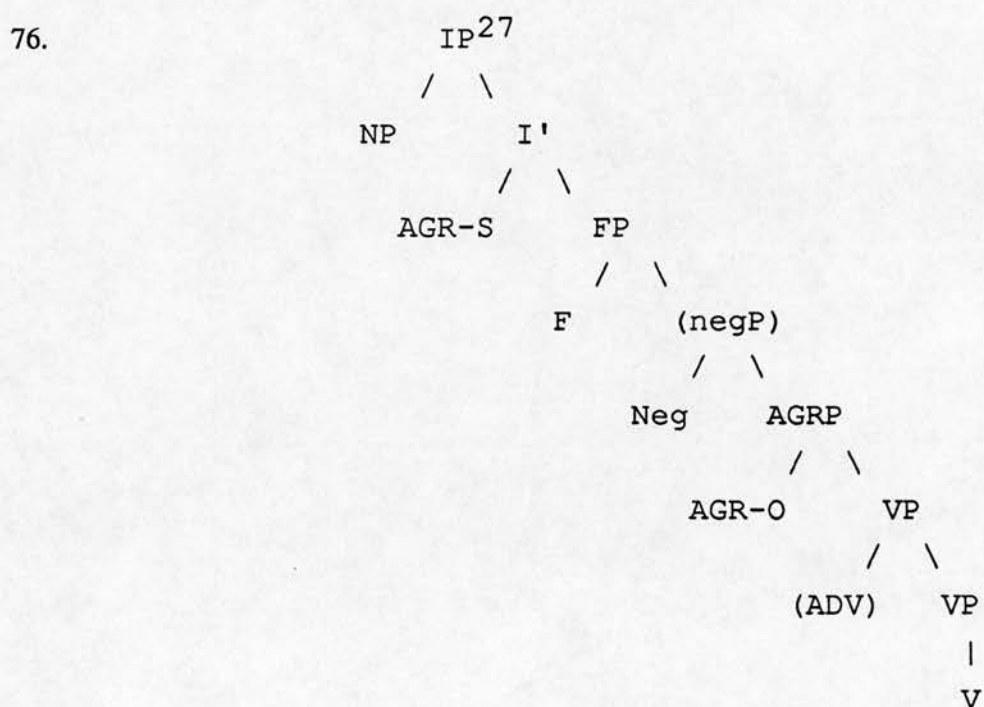
4.4.1. Agreement and tense are functional heads

To begin with, this section identifies the characteristics of tense and agreement suffixes, and then, discusses the syntactic derivation of these two morphemes.

The examples in 72-74 show that agreement and tense suffixes have fixed positions in a verbal form. The latter always immediately precede the former when these two suffixes appear in a verbal form, as seen in 72. If a tense suffix is not present, the agreement suffixes attach directly to verb stems or oblique bases. This indicates that the verb is the innermost constituent of a verbal form. As shown in 9 c and b in this chapter, this results in two ordering relationships: [VERB-TENSE-AGREEMENT] and [VERB-AGREEMENT]. These sequences of the verb and the tense and agreement suffixes cannot be interrupted by inserting any other lexical or functional element. This is an indication that, in syntax, agreement and tense suffixes select respectively tense and verb categories as their complements. The selectional property was described, in 3.2, as a major characteristic of functional categories. Thus, invoking this criterion, tense and agreement suffixes in Tamil are characterized as functional heads. This assumption is further supported by the fact that like any other functional head these suffixes cannot be iterated. Consistent with Fukui (1986, 1987), they also have Kase features. The agreement morph has features, such as person, number, gender, to be percolated up to its specifier position, and tense has case assigning properties. Moreover, as assumed by Ernst (1991) for English, they are bound morphemes that can head their own maximal projections taking another lexical or functional category as a complement. Therefore, the tense and agreement suffixes are identified to be functional heads, and are represented in functional trees in the lexicon. These trees, as shown in 3.5, have the suffix in question on the right as heads are final in Tamil. Their stem categories are specified on the left node of the tree.



When tense and agreement are assumed to be functional heads, their relative order needs to be accounted for. Two different hypotheses can be exploited to determine the ordering relationship of these two suffixes. The first approach is to assume one strict universal order following Chomsky (1988b) and Pollock (1989). According to the former, the agreement phrase (AgrP) dominates tense phrase (TP). TP realizes dominating Agr-O (object-agreement) which immediately precedes the verb. Finite and negative phrases appear in between Agr-S (subject agreement) and Agr-O while adverbs occur between Agr-O and the verb. e.g



This analysis has two major problems. First, it postulates numerous, probably unnecessary, functional categories for a given language regardless of whether the language provides evidence for such a formulation. Secondly, in order to derive well-formed syntactic structures within this analysis, complex movements need to be done. This is not desirable since it is not economical and results in complexity.

27. This tree is taken from Chomsky (1988b), his example 28. See also Iatridou (1990:552).

Alternative theories assume that the structure of a word mirrors the syntactic structure. The Mirror Principle of Baker (1985a, 1988), for example, suggests that the morphological ordering reflects the syntactic ordering. This implies that the number and the linear order of the functional categories differ from language to language. This makes it unnecessary to assume syntactic categories for which there is no morphological evidence in a given language. According to this approach, syntactic categories are hypothesized if and only if the data from the language in question confirms the existence of such categories. When categories are assumed they are ordered reflecting the order of the corresponding morphemes. This avoids unnecessary categories and complex movements. Compared to the strict ordering relationship, this is economical and simple. Therefore, the assumption that the morpheme structure in a word mirrors the syntactic structure, is used throughout this dissertation for analyzing morphological categories in Tamil.

When the occurrence relationship is taken to decide the relative order of tense and agreement suffixes, it is obvious that the former precede the latter. These two assumptions, i.e. tense and agreement suffixes, are functional heads and the latter realize outside the former, are employed next, to show syntactic derivation of verbal forms.

4.4.2. Derivation of tense and agreement

It was previously mentioned that agreement suffixes are of two types: some follow tense suffixes, others attach to verb stems or oblique bases. Out of these two, the derivation of tensed verbs is outlined first. The verbal form, in 77, exemplifies an instance where an agreement suffix follows a tense suffix.

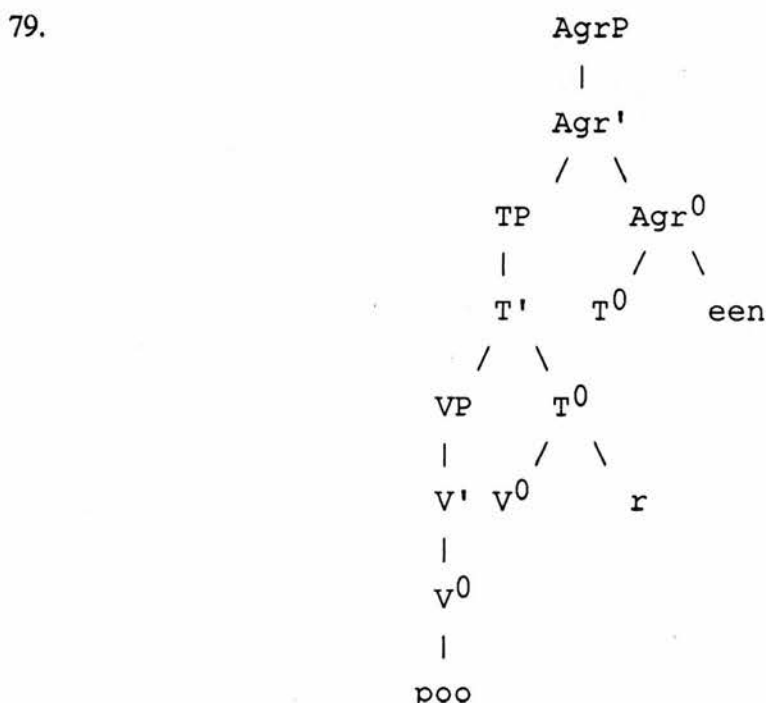
77. poo-r-een.
 go-PRES-1/SG
 (I) go.

To derive *pooreen* in 77, first the functional tree for the agreement suffix is projected into syntax as Agr^0 , assuming the relative order [T +AGR]. e.g.

78. Agr^0
 / \
 T^0 een

The functional tree for agreement has been specified for a tense complement. In order to satisfy this complement requirement, a tense suffix is projected in to the syntax and its maximal projection, e.g. TP, is assigned as a sister to Agr⁰.

It was observed in the functional tree in 75b that tense selects a verb stem as the complement. Therefore, T⁰ is complemented by a verb phrase (VP) headed by a verb (V⁰). These projections result in the following syntactic tree.



This syntactic tree, like the one in 39 of chapter 3, is also not a well-formed one at PF. There are empty X⁰ complements of Agr⁰ and T⁰ that violate the PF-Licensing Principle of Cann & Tait (1989), and there are unattached functional heads (e.g. Agr⁰ and T⁰), which are bound morphemes violating the Stray Affix Filter of Baker (1988).²⁸

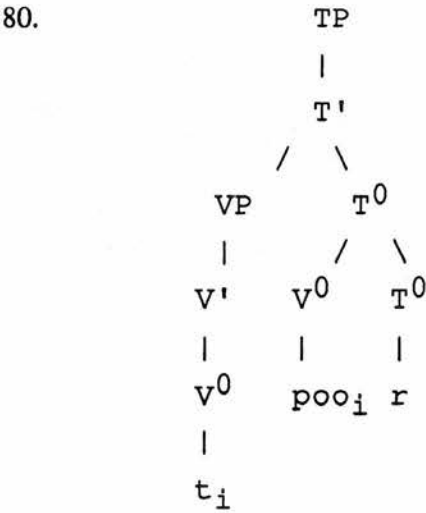
For deriving a well-formed verbal form, these morphological categories must be licensed by applying the licensing principles such as the PFLP, discussed in 3.5.1. It has also standardly been assumed that complements must be satisfied locally. Yet the empty complement nodes in 79 do not obey these requirements, and the structure is not acceptable.

To solve these problems and to derive a well-formed verb, heads are raised to the empty complement positions of the immediately dominating syntactic categories, as

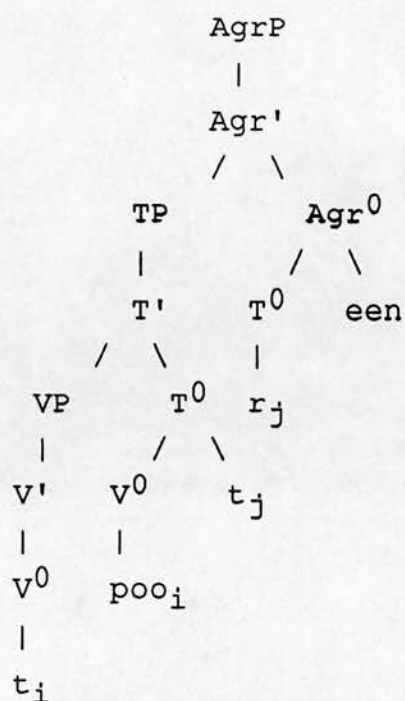
28. See 3.5.1 for the interrelationship of these two principles.

described in 3.5.2. These movements are considered to be an instantiation of substitution rather than adjunction since they occupy the empty complement positions of the functional heads. These subsequent movements are illustrated in the following syntactic trees.

First, the V^0 is moved to the empty complement position of T^0 .



This movement satisfies the complement requirement of T^0 , and reduces the number of empty nodes to one. Licensing the empty T^0 complement of Agr^0 poses a problem since two options are available. That is, this position can be filled by raising either the tense head $-r$ alone or T^0 (V^0+r combination) as a whole. If the first option is taken and the tense suffix is raised to the complement of the Agr^0 the following tree results.



Evidently, this derivation satisfies the PFLP since all positions contain a phonetic material or a trace of a chain. It also fulfils the complement requirements of the functional heads locally. Nevertheless, this analysis is undesirable for theoretical reasons: That is, movements carried out in 81 satisfy the PFLP, but the derived form is unacceptable since it violates the A over A principle of Chomsky (1968). This principle disallows moving constituent parts of a X^0 category out of their structural positions.²⁹ When V^0 is moved to the V^0 complement of T^0 , the verb and the tense suffix (i.e. *poo-r*) become a single unit dominated by T^0 . Therefore, one constituent of T^0 (e.g. *-r*, the tense suffix), cannot be removed and attached to the complement of the higher node, leaving V^0 (the other constituent of T^0) behind. This undesirable result can be avoided by adopting the second

29. Originally, the A over A Principle was formulated to describe the behaviour of the maximal projections such as NPs, AdjPs. Chomsky states:

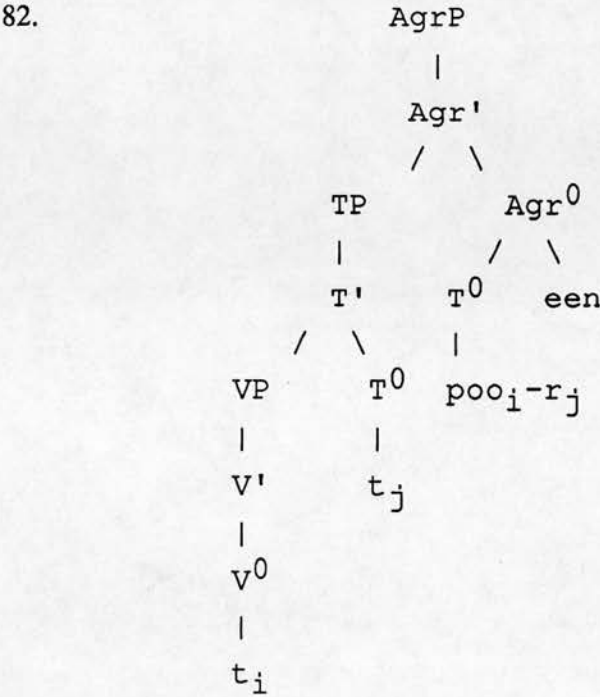
"Suppose we were to impose on grammatical transformations the condition that no noun phrase can be extracted from within another noun phrase—more generally, that if a transformation applies to a structure of the form

[S ... [A ...]A ...]S

for any category A, then it must be so interpreted as applying to the *maximal* phrase of the type A." (P. 43).

When this principle is applied to the X^0 categories which have internal structures it is similar to the lexical integrity hypothesis according to which syntactic rules cannot refer to parts of words. (see Lapointe 1981). In the present context, it may mean that syntactic rules cannot apply to parts of X^0 categories.

option according to which T^0 , [T^0 = verb + tense suffix] is raised as a whole. This satisfies the necessary syntactic requirements and generates the well-formed tree given in 82.

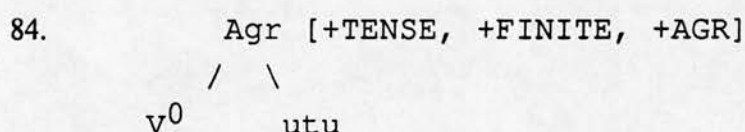
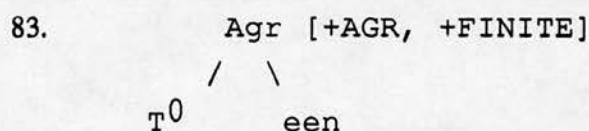


4.4.3. Agreement contains finiteness

The analysis developed so far seems to be correct since it observes the syntactic principles such as the PFLP and A over A, and apparently, results in a well-formed word. However, the derivation outlined is questionable based on the MLH, which, as described in 43 of 3.5.1, requires each morpheme to head its own maximal projection. The flaw is that the sentences with the agreement suffixes are finite, but the tree in 82 does not have a syntactic position to license the [+FINITE] morpheme.

Moreover, when the functional tree for the agreement suffix in 78 is re-examined it is obvious that syntactic trees in 81-82 have not licensed the [+FINITE] feature since this information has not been specified in the information structure of the F-tree for the agreement suffix *-een*. In order to overcome this difficulty, I argue that the agreement suffix is the syncretized morph of both the agreement and finite morphemes. A piece of evidence for this claim comes from the sentences with complementizers. It was noted in examples 3-7 that both agreement and finite suffixes can precede complementizers. These examples show that the complementizers select only finite clauses as their complements.

Indication of this is that agreement suffixes also contain the finite morpheme. This syncretism can further be exemplified by the agreement suffixes *-utu* and *-um*. These suffixes, as shown in examples 72-74, are directly attached to the verb stems, and convey tense, finite and agreement distinctions. Hence, they are also characterized as syncretized forms of multiple morphemes. When a suffix is a syncretized form of several morphemes it is categorically identified by one of the (salient) morphemes, and all morphemes are specified to the right of the category. Apparently, tense suffixes contain only the tense morpheme and are not syncretized forms. So identifying their category is not difficult. To distinguish agreement morphemes from the finite ones, features with the value [+] are taken into account. Agreement morphemes have [+FINITE, +AGR] or [TENSE +FINITE, +AGR] features; Finite suffixes have [+FINITE, -AGR] properties. Tense suffixes have only the tense morpheme. Thus, when syncretized forms are identified, suffixes with [+FINITE, +AGR] or [TENSE +FINITE, +AGR] are categorized as AGR and those with [+FINITE, -AGR] are called FINITE.³⁰ Accordingly, all syncretized morphemes of the suffix in question are given, as an unordered list, right to the categorial specification. The functional trees of *-utu* and *-um* are assigned V^0 complements as they have syncretized tense morphemes, but the other agreement suffixes are specified for a T^0 complement.



4.4.4. Problems with syncretized morphemes

With the identification of syncretized morphemes two problems emerge. The first difficulty is related to the relative order of the morphological categories in an inflected form. In 4.4.1, the linear order of the suffixes was assumed to mirror the relative order of the lexical and functional elements in a syntactic tree. It is obvious that [+FINITE] cannot precede [+TENSE] as the tense morpheme requires a V^0 complement. Therefore, the tense morpheme must be realized immediately after the verb.

³⁰. I will discuss finiteness in chapter 5.

The order of agreement and finiteness, however, remains a mystery since there is not a single instance where the finite and agreement suffixes appear in the same verb. It seems that the morphology does not provide any basis for fixing the relative order of these two morphemes. A clue to differentiate these two morphemes comes from the finite markers such as *-um*, *-ay*. The verbs with these suffixes have [+TENSE, +FINITE] properties, but not [+AGR]. These suffixes show that finiteness and tense morphemes come together or are realized adjacently. Further, representing finiteness prior to agreement is consistent with Chomsky (1988b) (See the tree in 76).

Further, identifying a separate syntactic position for the finite morpheme is significant for the satisfaction of the MLH which requires morphemes to be properly licensed by heading their own maximal projections to receive Full Interpretation. If finiteness and agreement are projected as one syncretized category, the morphemes in question do not receive an opportunity to license their properties properly. This approach is not economical, but it avoids complexity that a syncretized finite and agreement (FA) category may cause. Thus, [FINITE] is assumed as a separate category and is assigned a syntactic position that precedes agreement. This gives the relative order in 85 for a verb with tense and agreement suffixes.

85. VERB+TENSE+FINITENESS+AGREEMENT

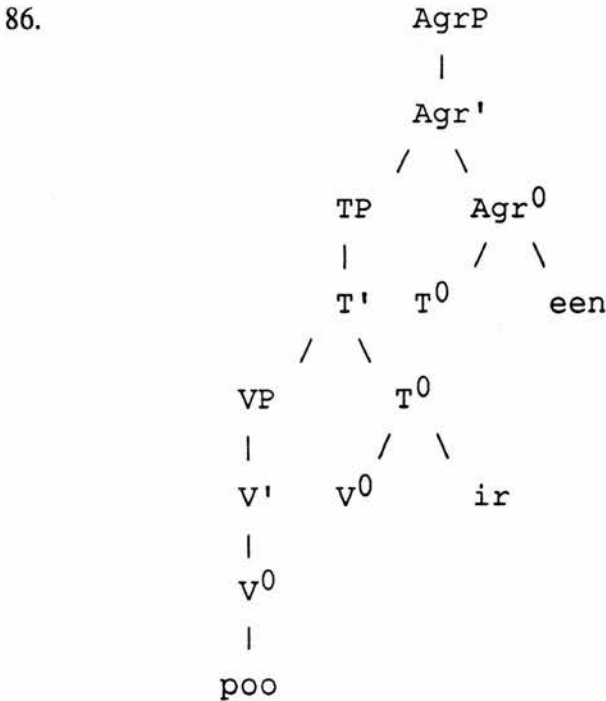
Once the relative order in 85 is assumed, a second question arises concerning projections and licensing. Since these suffixes contain multiple morphemes, it is not obvious which morpheme must be projected and licensed first. One possibility is to treat these suffixes as syncretized categories such as FA^0 (for *-aar* in 73 and for other agreement suffixes other than *-um* and *-utu*), TFA^0 (for *-utu* and *-um* and finite suffixes). Nonetheless, this approach is not attractive on several grounds. First, such a treatment hypothesizes many syntactic nodes such as T^0 (tense), FA^0 (finite + agreement), TFA^0 (tense + finite + agreement), $NEGT^0$ (negative + tense), $VNEGT^0$ (verb + negative + tense). Secondly, projecting syncretized categories is not consistent with the relative order given in 85. Third, this approach is not economical since in some cases T^0 appears as an independent projection, but in other cases as a syncretized category. More importantly, it was noted that projecting syncretized categories prevents different morphemes being licensed by heading their own maximal projections. Thus, projecting syncretized morphs under a single syntactic node is not desirable.

The next possibility is to project one of the morphemes first and to license the other morphemes during the derivation. There are mainly two possible options. These are

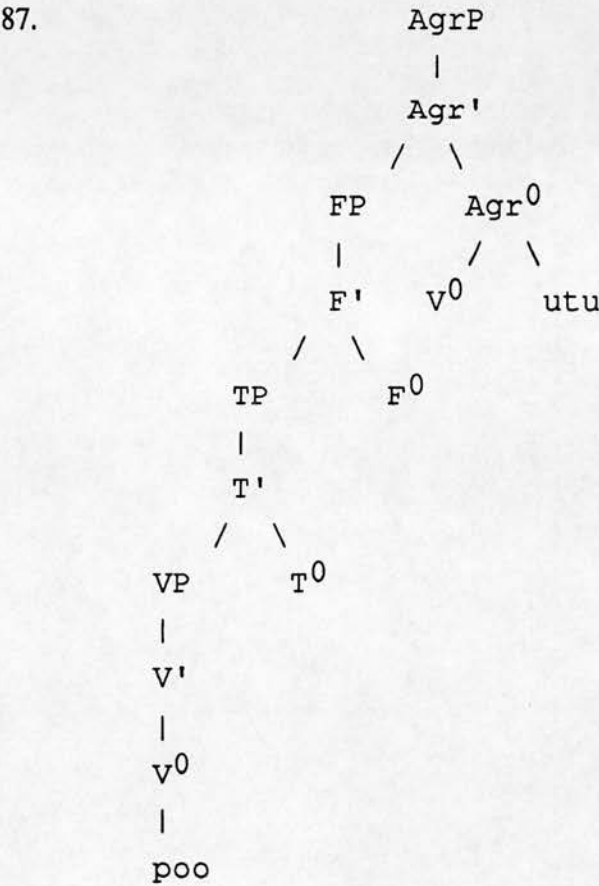
concerned with projecting the morpheme that is compatible with either the highest or the lowest position of the relative order given in 85 first. If the first option is assumed either the verb in the syntactic tree can be raised up to Agr^0 or the agreement suffix can be lowered to V^0 . Both of these movements are problematic for the well-formedness condition. According to the second alternative, the suffix with syncretized morphemes can first project the morpheme consistent with the possible lowest position of the order given in 85. This suffix, then, can subsequently be raised to the empty head positions of the relevant syntactic categories to license the rest of the morphemes. I call the latter approach as the licensing hypothesis. I turn to illustrate these two types of derivations in the next two sections.

4.4.4.1. The problems related to the verb raising to Agr^0 and Agr^0 lowering to V^0

The raising analysis assumes that the agreement morpheme is projected first into syntax when the agreement suffixes are projected. They, except *-utu* and *-um*, are assigned TPs as complements, and the heads of these TPs are provided with VP complements, as described previously. That is because the agreement and tense suffixes select respectively tense and verb complements. These projections give the following syntactic tree.

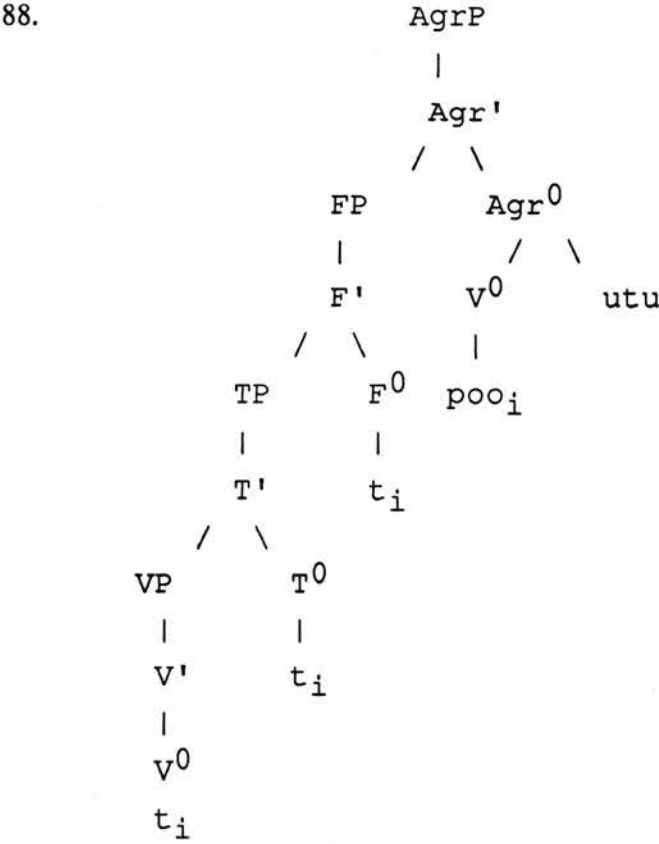


This tree is inadequate, as far as the MLH is concerned, since it does not have a syntactic position to license the [+FINITE] morpheme of the agreement suffix. To avoid this difficulty a finite phrase (FP) with an empty head can be projected between the AgrP and TP. If this proposal is assumed, there must be two empty headed phrasal categories in the syntactic tree for a verb with *-utu* and *-um*, e.g. *pookutu* 'it goes, it is going' and *pookum* 'it will go', since they carry tense and finite morphemes with them. e.g.



This approach has several severe problems. The first problem is related to the presentation of syntactic trees. At first glance projecting a FP as a sister to Agr⁰ is not appropriate since *-utu* is specified for a V⁰ complement. When the procedure of projections of the functional categories in 79 is invoked, this Agr⁰ must be assigned a VP as a sister, because, according to the lexical information given in the F-tree in 84, *-utu* selects a V⁰ complement. Yet projecting a FP, instead of projecting a VP dominated by Agr' in this case, is inconsistent with other syntactic trees because X⁰s are always assigned YPs as sisters if the former select Y⁰ complements.

Secondly, the tree in 87 is problematic with respect to licensing principles. If being a part of a chain is taken to be a requirement for satisfying the PFLP, one can raise the verb *poo* to the complement position of Agr^0 through T^0 and F^0 leaving traces in V^0 , T^0 and F^0 .



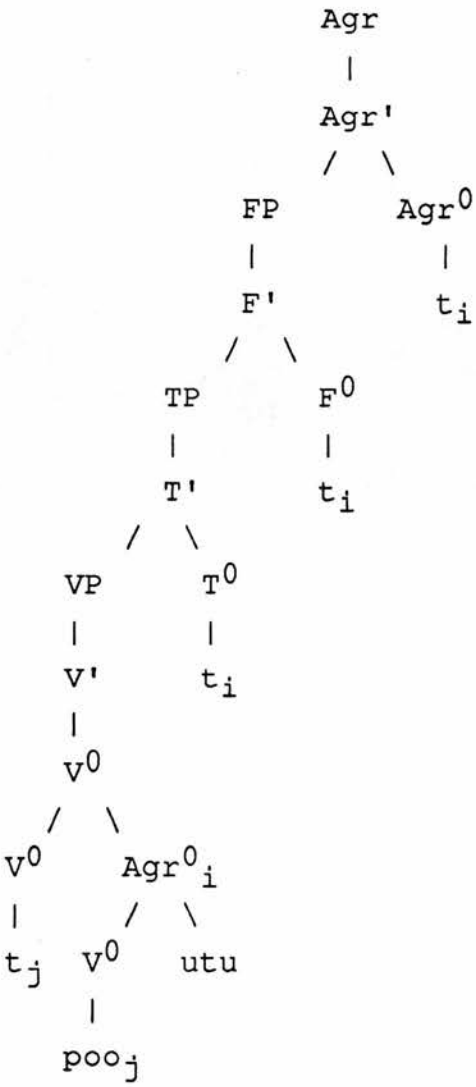
However, this syntactic derivation is unacceptable for two reasons. In the first place, this derivation is peculiar as the verb has moved to the empty T^0 and F^0 nodes which are not categorially compatible. Therefore, this movement cannot be considered to be an instance of substitution described in 3.5.1.

Secondly, if this movement is assumed to be a case of adjunctions it implies that there are empty T^0 and F^0 nodes. Assuming empty T^0 and F^0 nodes in a syntactic tree where a suffix, e.g. *-utu* or *-um*, which has syncretized tense and finite morphemes, results in two occurrences of the tense and finite morphemes. This is not desirable since it was noted in 3.2 that the functional categories are not recursive. (I will turn to this point in 4.5 below).

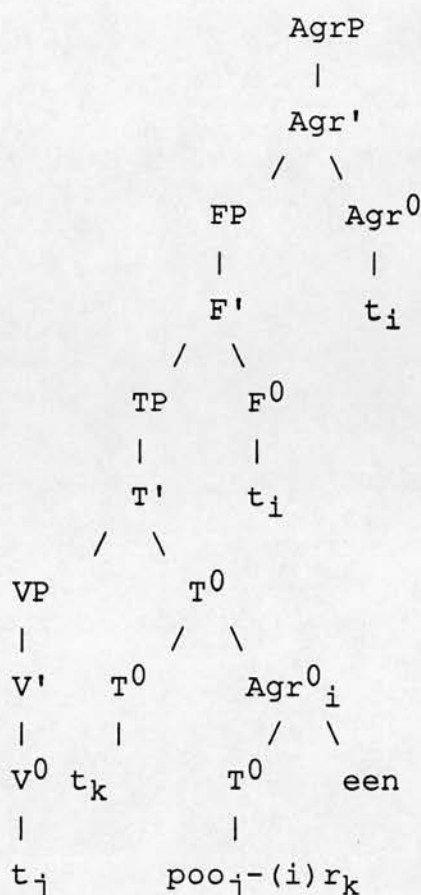
Third, and more importantly, the tense and finite morphemes of *-utu* in 88 are not properly licensed by heading their maximal projections. Thus, it violates the MLH which requires a parallel relationship between syntactic structures and morphological features.

Fourth, the tree in 87 seems to have unmotivated empty heads which are not desirable. To generate this syntactic tree one has to hypothesize two types of F-trees for the morpheme in question, i.e. one functional tree for the relevant suffix and another for the counterpart empty morpheme. Due to these undesirable consequences, the derivation in 88 that suggests verb raising to Agr^0 is abandoned.

Alternatively, the agreement suffix can be lowered. This approach is better than raising V^0 to the V^0 complement position of Agr^0 since it allows the tense and finite morphemes to head their projections. Nevertheless, the question is whether Agr^0 as a whole (i.e. stem V^0 + suffix) or only *-utu* is lowered. If the agreement suffix is lowered to adjoin the verb, the V^0 complement is stranded and remains empty, violating the PFLP and A over A Principle. When Agr^0 as a whole is lowered, it creates an adjunction structure. This instance of adjunction creates a difficulty in relation to the relevant order depending on whether the lowered category is adjoined to the right or to the left of the host category. If it is attached to the right, the correct order will be preserved, but V^0 appears to be still null. Alternatively, when the adjunction is made to the left of the V^0 head, it would create unwanted and undesirable syntactic structure. Of these two options the former is desirable since it is less costly. Thus, AGR^0 in 87 is lowered and is adjoined to the right of V^0 , and the verb is raised to the V^0 complement position of AGR^0 . This results in the tree in 89.



The resulting verb form is acceptable, but not the syntactic derivation. First, the approach has assumed two types of movement, namely lowering and raising which is not economical. Second, it has used both substitution and adjunction. AGR^0 is adjoined to V^0 and all other empty positions have AGR^0 substituted into them. If this approach is correct, the derivation of *pooreen* in 90 will exploit all mechanisms such as substitution, adjunction, lowering and raising.



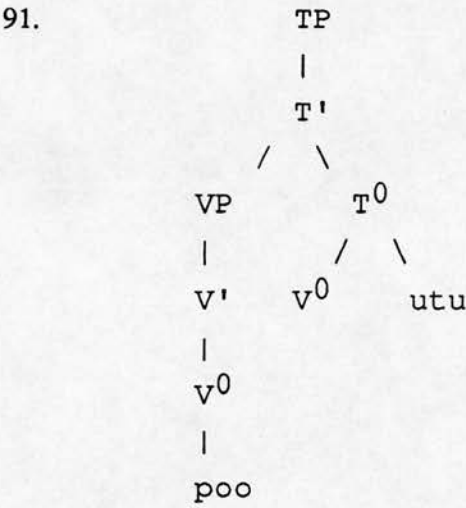
In this derivation, AGR^0 is lowered to T^0 , licensing the agreement and finite morphemes in AGR^0 and F^0 . In T^0 , an additional T^0 is created for the lowered AGR^0 to adjoin. The verb is raised to satisfy the V^0 complement of T^0 . Finally, T^0 , that immediately dominates the tense suffix, is moved to the T^0 complement position of AGR^0 .

This derivation satisfies the PFLP, the MLH and the licensing requirements, but it has all the undesirable results related to lowering. First, the analysis presented is uneconomical and rather complex. Second, it has been discussed in the literature that the traces of a moved category must be C-commanded by their antecedents. Thus, if lowering is assumed in syntax, the antecedents must be raised to their original positions, at least, at LF to fulfil the C-commanding requirement. This is not a very economical procedure because it exploits both raising and lowering. Third, lowering results in an ordering difficulty. On the one hand, when the lowered category is adjoined to the right of the head, it creates a problem with respect to the host category since heads are always final in this language. On the other, if adjunction is made to the left of a X^0 category, an

unacceptable form will result.³¹ Thus, lowering is not desirable either. As a result, the lowering hypothesis is also dismissed.

4.4.4.2. The Licensing Hypothesis

The alternative approach hypothesizes that a suffix with multiple morphemes first projects the morpheme compatible with the lowest position of the relative order given in 85. The agreement suffix *-een*, for example, is projected as a finite phrase since finiteness occupies a lower position than agreement. *-utu* and *-um*, which, as shown in 84, have syncretized tense, finite and agreement morphemes, head a tense phrase first because in this case tense is the morpheme to be realized in the lowest position of a syntactic tree. When *-utu* heads a TP, it is assigned a VP as a sister, satisfying the complement selectional properties of the agreement suffix. Thus, *pookutu* has the tree in 91.



To satisfy the complement requirement of T⁰ the verb is raised to the complement position of *-utu*. This derives the verb *pookutu*. This derivation may seem to be legitimate, but in fact it is not, because the finite and agreement properties of *-utu* have not been licensed syntactically. Thus, finite and agreement morphemes cannot be fully interpreted. In other words, the MLH suggests that the morphemes of a syncretized morph must head their maximal projections in order to receive Full Interpretation. In order to overcome this difficulty a finite phrase and an agreement phrase are projected dominating TP and FP respectively. When the morpheme licensing hypothesis is assumed, one may question

31. See Cann and Tait (1994), Tait (1991:102-107), Chomsky (1992:42) and Ouhalla (1991:45) for discussion on the problems of lowering.

whether the person, number and gender morphemes of the agreement morphs project their maximal projections. Apparently, verbal morphology in Tamil does not provide any evidence for the existence of single morphs that represent these morphemes, in parallel to the tense and finite suffixes. Therefore, I assume that there are not separate person, number and gender projections within verbal morphology. This indicates that empty headed (additional) nodes are generated, if and only if, there is independent morphological evidence in the language for the existence of the category in question.

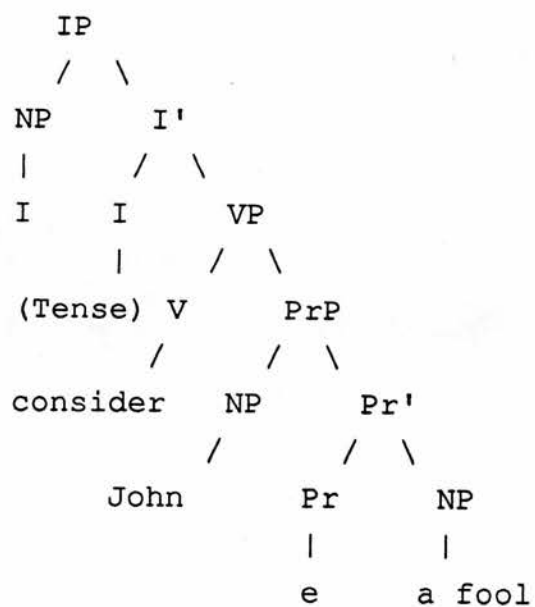
Empty categories and feature checking are not a new assumption made here. In his analysis of aspectual auxiliaries in Tamil, Schiffman (1969) has proposed a similar working hypothesis within transformational grammar. He generates several empty V nodes in a syntactic tree depending on how many different aspectual features an auxiliary verb may have. When all empty V heads are projected the auxiliary verb is attached to the lowest node. The head verb is, then, raised up, licensing all empty positions and therein checking relevant features.³² Further, Larson (1988), Pollock (1989), Bowers (1988, 1990 (cited in Sumangala 1992), Rouveret (1991), Pesetsky (1990), Sumangala (1992) have suggested empty heads. The main deficiency of these works, with the exception of Rouveret (1991), is that the empty heads that they have assumed are not morphologically motivated.³³ In Larson's VP-shell approach, the empty V-heads serve as landing sites for a moved verb. In order to licence all empty V-heads, the verb in Larson's syntactic trees has to be raised up to the highest V⁰. Hence, there is no possibility for this verb to land in an intermediate level. This approach provides Larson with the necessary background to maintain the single complement and specifier hypothesis. Apart from this advantage, there seems no apparent (morphological) motivation for the empty heads in his theory.

Bowers (1988, 1990) suggests an empty predicate head for small clauses, and attempts to impose a unified structure for both main and small clauses. Thus, he base generates small clauses and main clauses in the same structure. This is shown in 92-93 (adopted from Sumangala 1992).

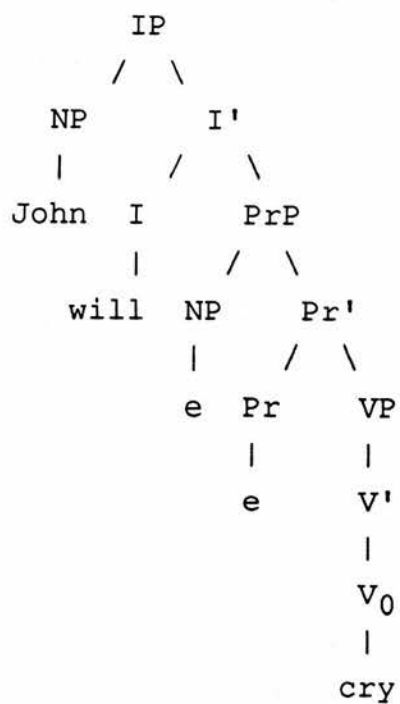
32. See Chomsky (1992:19, 41) for a morphological checking theory. He suggests that a verb has to check its agreement and tense features in the Agr and Tense heads in a tree.

33. See Speas (1990:78-80), Tait (1991:83-102) for similar observations.

92. I consider john a fool.

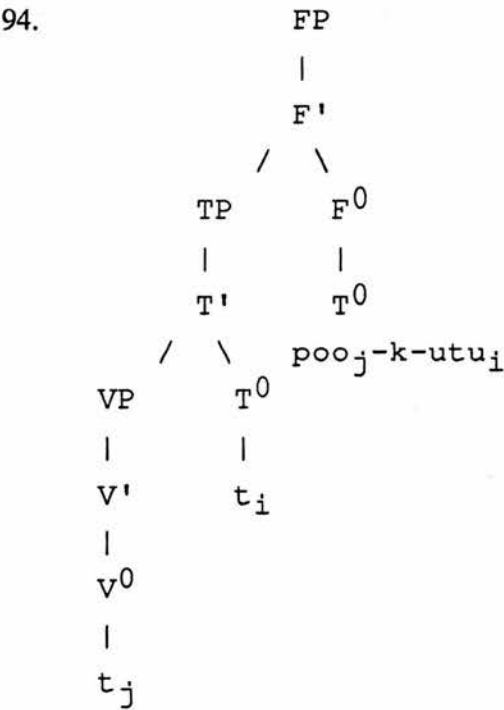


93. John will cry.



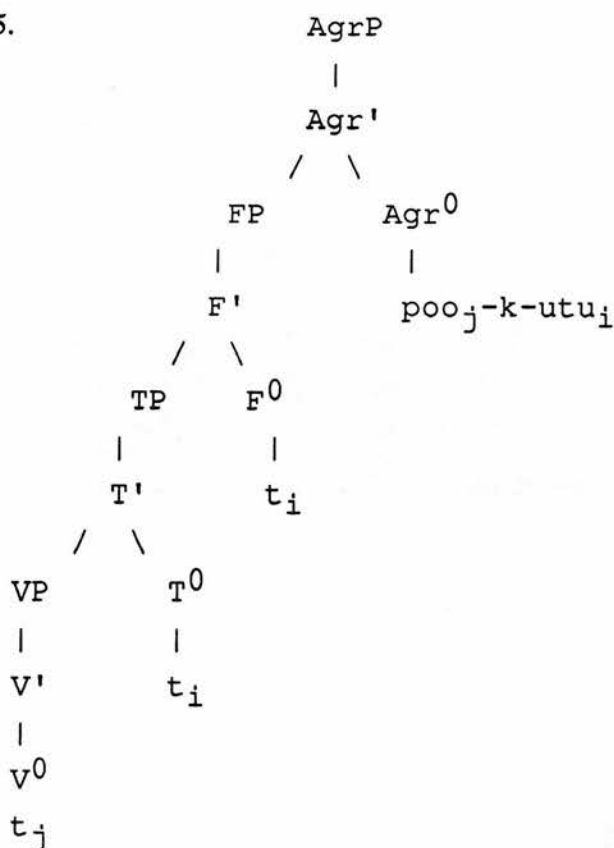
In 93, 'John' is base-generated in the specifier of the Predicate Phrase (PrP) and is raised to Spec I. Nevertheless, it seems that the empty Pr. head is (morphologically) unmotivated and always empty.

The empty headed phrasal categories proposed in this section, however, are fully motivated by licensing requirements. They are not generated by projecting zero functional (or lexical) heads, but they are created in the syntax to provide necessary syntactic positions to license the syncretized morphemes of the suffixes which have already been projected. Thus, a FP with an empty head is generated dominating TP in the syntax and then, T^0 is raised to the F^0 head of FP. e.g.



Subsequently, an empty headed AgrP is formed, dominating FP, and the verbal form in F^0 is raised to the Agr^0 head licensing the agreement morpheme.

95.



This analysis generates well-formed verb forms satisfying all syntactic requirements. Before concluding this chapter, some advantages of this approach are discussed in the next section.

4.5. Consequences

The syntactic analysis developed in this chapter has several desirable consequences. To begin with, the licensing hypothesis is preferred to the verb raising and Agr lowering hypothesis since it is simpler and avoids all undesirable consequences, discussed in 4.4.4.1.

Second, the licensing approach is able to predict the ungrammaticality of the verb forms in 96-97.

96. *poo-um-r-een
go-3/SG/NEUTER/FUTURE-PRES-1/SG

97. *poo-k-r-utu
go-k-PRES-3/SG/NEUTER/PRES

-um in 96 is base generated in T^0 as it is the lowest possible morpheme that is compatible with the linear order given in 85. Therefore, there is not a syntactic position to project another tense suffix to the same syntactic tree. Further, it was observed that the functional categories do not iterate themselves. Thus, projecting an extra tense node is not acceptable. According to Cann (1993a:61-62) stacked functional heads of the same category are not permitted and within a single theta domain categories must be different from each other. He formulates this restriction as a version of the Extended Projection of Grimshaw (1991) which suggests that categorially compatible lexical and functional categories are in the same extended projection.³⁴ In 98 the symbol \sqcap indicates category interaction and $\text{Cat}(a)$ indicates the category of the node a .

98. In a tree, $[a^2 \dots a^0 [B^2 \dots B^0 [y^2 \dots] \dots]]$, if a^0 is lexically filled and neither B^2 nor y^2 is θ -marked, then $\text{Cat}(a) \sqcap \text{Cat}(B) = \text{Cat}(a) \Vdash \text{Cat}(y) = \emptyset$ and $\text{Cat}(a)$ is c-compatible with $\text{Cat}(B)$, which is c-compatible with $\text{Cat}(y)$.

This formulation states that if a lexically filled X^0 node governs YP, then the latter must be categorially distinct from the former, unless X^0 theta marks YP.

Obviously, in the sequence *poo-um-r*, the present tense suffix does not theta-mark *-um*. Therefore, an occurrence of *-r*, the present tense suffix and *-um*, the morph with

34. i. Extended Projection:

x is the extended head of y , and y is an extended projection of x iff
 (a) y dominates x ,
 (b) y and x share all categorial features,
 (c) all nodes intervening between x and y share all categorial features.
 (d) If x and y are not in the same perfect projection, the F value of y is higher than the F value of x
 where n intervenes between x and y if y dominates x and n ; n dominates x , and n does not dominate y .

ii. Perfect Projection:

x is the perfect head of y , and y is an perfect projection of x iff
 (a) y dominates x ,
 (b) y and x share all categorial features,
 (c) all nodes intervening between x and y share all categorial features.
 (d) the F value of y is the same as the F value of x

Grimshaw (1991:3-4)

syncretized tense, finite and agreement morphemes in the same domain do not obey the Extended Projection (EP), and thus, it is unacceptable. For the same reason, if the tense suffix *-ir* is projected into syntax, *-utu* and *-um* cannot appear in the same verbal form. Thus, *poo-r-um* or *poo-r-utu* are rejected.

It was illustrated that *-um* or *-utu* are base generated in T^0 having a VP complement as the sister, and that the verb is moved to the V^0 complement of T^0 . Subsequently, T^0 as a whole is moved to F^0 and then, to Agr^0 to license the finite and agreement morphemes. As a result, another agreement suffix cannot be attached to this verbal form since this additional head would violate the licensing principle. First, there are not finite and agreement nodes where the agreement suffix can be attached. Second, iterating functional categories are not acceptable. This explains the unacceptability of *poo-um-een* and *poo-utu-een*. The licensing principle also disallows *poo-een-utu* and *poo-een-um* because these projections violate selectional requirements of the suffixes in question.

4.6. Summary

In this chapter morphosyntactic properties of agreement and tense suffixes have been analyzed. The first part of the discussion is devoted to introducing these two types of suffixes. Accordingly, the second half of the chapter was confined to the analysis of morphosyntactic properties of them. First, invoking the properties of functional heads, discussed in 3.2, tense and agreement morphemes were identified as functional heads. Second, applying the approach suggested in section 3.5, derivation of verbal forms with tense and agreement suffixes was illustrated. This approach was further expanded by hypothesizing that all morphemes must head their own maximal projections for the requirement of Full Interpretation. As a result, the agreement suffixes are characterized as the syncretized forms of the [+FINITE, +AGR] or [+TENSE, +FINITE, +AGR]. This assumption is not an isolated instance as syncretized forms are observed in many languages such as Chinese (Rhys (1992)), English (Bhatt and Yoon (1991) (cited in Rhys (1992))) and Russian (Spencer (1991)). It was suggested then that when a suffix contains multiple morphemes, they must license their maximal projections. Having discussed two possibilities for licensing these morphemes, finally, it was concluded that these suffixes must project the morpheme that is compatible with the lowest position of the relative order given in 85. Accordingly, in order to license the rest of the morphemes, phrasal categories of the morphemes included in the suffix are created dominating the existing category and the suffixes in question are raised to head these newly formed phrases. One of the

advantages of this approach is that it shows how morphological categories form small syntactic trees and expand them for satisfying the licensing requirements of syncretized morphemes. As a result, it was hypothesized that not only the basic syntactic trees, but also the derived syntactic trees show the interaction between morphology and syntax. This approach is further developed in the next chapter applying the functional category approach to finite and negative suffixes.

Chapter 5

Morphology of finiteness and negation

5.0. Introduction

I argued in chapter 4 that the finite morpheme in Tamil is syncretized in the agreement suffixes. In addition to these agreement suffixes, there is, given in 4.1, a set of suffixes, namely, *-um*, *-u*, and *-ay* that denotes finiteness. Lehmann (1989:83-85) introduces *-um* and *-ay* respectively as the third person singular neuter and third person plural neuter (agreement) suffixes. Yet he gives subject nouns from all three persons for the negative verb with *-ay*, e.g.

1. naan/nii/avan maanavan il-l-ay.
I/you/he student be not-3pln (=3/PL/NEUTER)
I am/you are/he is not a student.

(Lehmann, 1989:83, example 163)

The fact that the verb with *-ay* can occur with subject noun phrases from all three persons implies that assuming *-ay* as the third person plural neuter suffix is not accurate. Also, it will be shown, at least in ET, *-um* can have subject nouns from all three persons. Indication of this is that they are impersonal. In 4.1, it was also observed that verbal forms with these suffixes, unlike non-finite forms, can precede complementizers. This behaviour of the finite suffixes implies that they express finiteness. Thus, I identify *-um*, *-ay*, *-u*, which are exemplified in 2-5, as finite suffixes.

2. en-akku avar-a teri-y-um.
I/OBL-DAT he-ACC know-y-FN
I know him.

3. *taay/taay-kku poo-k-a eel-um.*
 mother/mother-DAT go-k-INFN can-FN
 The mother can go.

4. *ammaa viiTT-ila iru-kk-u.*
 mother house/OBL-LOC be-kk-FN
 The mother is at home.

5. *en-akku puttakam il-l-ay.*
 I/OBL-DAT book not to be-l-FN
 I don't have a book.

These finite suffixes have parallel distribution with the agreement suffixes whereby they do precede the complementizer *-(n)nu*, the dubitative marker *-oo* and the interrogative marker *-aa*. Yet these suffixes differ from the agreement suffixes in several respects. First, they, unlike the agreement suffixes, do not impose a person, number and gender restriction on their subject noun phrases. This implies that *-um*, *-u* and *-ay* do not have agreement (= +AGR) properties. Second, the finite suffixes, but not those of agreement, do not follow tense suffixes, and attach to verb stems directly. Third, these suffixes always accompany a limited number of verbs or suffixes such as defective verbs (modal verbs are included), the negative verb *il* 'not to be', the negative suffix *-aat* and the stative verb *iru* 'to be'. It must be noted that the finite suffixes have severe restrictions in their application; *-um* follows only the modal and defective verbs; *-u* occurs after *iru* and *-aat*; *-ay* accompanies only *il*. These properties of the finite suffixes and negative forms imply that they have complex morphology. Therefore, this chapter is devoted to discussing morphosyntactic properties of the finite and negative forms.

The analysis provided in this chapter also aims at developing the approach put forward in chapter 4. In particular, two assumptions will be tested by extending the notion functional category to the finite and negative forms. The first assumption is that suffixes in Tamil are syncretized forms of multiple morphemes. The second is that the order of morphemes in a word mirrors the syntactic structure revealing the interaction between syntax and morphology. To begin with, section 5.1 describes three environments, namely negative verbs, a negative suffix and modal verbs, where finite suffixes occur. Accordingly, sections 5.2 and 5.3 analyze morphosyntactic properties of finite and negative elements. Finally, section 5.4 outlines non-finite forms and their syntactic behaviour.

5.1. Negative forms and modal verbs

Negation in Tamil is expressed by negative verbs *il* 'not to be, not to exist' and *maaTT* 'will not' and the negative suffixes *-aat* or *-aama*.^{1, 2} *il-* attaches only to the finite marker *-ay* whereas *maaTT-* accompanies agreement suffixes.³ Thus, the former has only one form, *illay*, but the latter has several forms that denote agreement.

6. naan poo-k-a maaTT-*een*.
 I go-k-INFN will not-1/SG
 I shall not go.

7. naay-ukku cokam il-l-*ay*.
 dog-DAT health not to be-l-FN
 The dog is sick.

maaTT, however, does not attach to the third person neuter agreement suffixes *-utu* and *-um* in the present and future tenses respectively. Instead, a verb with the negative suffix *-aat* and the finite suffix *-u* occurs in the same paradigm to express the third person neuter agreement.⁴ e.g

¹. *maaTT-* has been introduced as either an affirmative or a negative verb. According to Lehmann (1989:69), the auxiliary verb *maaTTu* means 'will'. Arden (1942: section 475, 507) describes it as 'can' or 'will'. Nevertheless, Andronov (1977) describes it negatively as 'not to intend', 'not to be going'. In the present work, it is treated to be the syncretized morph of verb, negative and tense morphemes.

². Scholars on Dravidian linguistics do not agree on what the negative suffix is. Subramoniam (1959) argues that the negative morpheme in Tamil is *-a*. Andronov (1976, 1977) points out that *-aa* is the only possible negative morpheme that can be reconstructed for the Proto-Dravidian. For the present purpose, I consider *-aat* and *-aama* as the negative forms in modern Tamil. See Asher (1982:176) and Lehmann (1989:76) for a similar segmentation.

³. *il+ay* > *illay* has a reduced form *-la*. Thus,
poo-k-a il-l-ay > pookala.
go-k-INFN not to be-l-FN
X did/does not go.

⁴. I shall discuss a possible explanation for this behaviour of *maaTT* and the agreement suffix.

8. atu cari-y-aa var-aat-u.
 it correct-y-ADV come/OBL-NEG/TENSE-FN
 It does not go very well.
9. * atu cari-y-aa var-a maaTT-um.
 that correct-y-ADV come/OBL-INFN will not-3/SG/NEUTER

The negative verbs *il* and *maaTT* have some similarities. First, they are defective and always follow infinitive forms of main verbs. Second, they (and verbs with negative suffixes as well) do not attach to tense suffixes, but depending on the context *illay* expresses past, present, and some times future while *maaTT* indicates only future.

10. naan kaTay-ukku poo-k-a il-l-ay.
 I shop-DAT go-k-INFN not to be-l-FN
 I do/did/will not go to the shop.
11. naan kaTay-ukku poo-k-a maaTT-eeen.
 I shop-DAT go-k-INFN will not-1/SG
 I shall not go to the shop.

It is noteworthy that these negative verbs, however, appear in different contexts. *maaTT* is realized only after an infinitival phrase, but *illay* occurs in several environments. First, *illay*, as a non-existential verb negates locative (12), existential (13) or copula expressions (14).

12. appaa viiTT-ila il-l-a(y).
 father house/OBL-LOC not to be-l-FN
 The father is not at home.
13. (en-akku paci il-l-ay.
 (I/OBL-DAT) hunger not to be-l-FN
 I am not hungry. (lit. to me hunger does not exist.)
14. atu nalla-tu il-l-ay.
 that good-3/SG/NEUTER/PRO not to be-l-FN
 It is not good.

Second, when *il* follows a gerundive noun with present or past tense suffixes, it indicates respectively a habitual and an unfulfilled (conceivable, but not actual, in other words, unrealized) action. Thus, the person referred to in 15 does not drink (alcohol) as a habit, and the one concerned in 16 so far has not been to America, but if there is a chance, he may go there some day or the other in the future.

15. avar kuTi-kk-ir-atu il-l-a(y).
 he drink-kk-PRES-GNOML not to be-l-FN
 He does not drink (alcohol).
16. naan amerikaa-v-ukku poo-n-atu (i)l-l-a(y).
 I America-v-DAT go-PAST-GNOML not to be-l-FN
 I have never been to America.

Third, *il*- denotes either present or past tense when it follows an infinitival phrase.

17. naan ankee poo-k-a (i)l-l-a(y).
 I there go-k-INFN not to be-l-FN
 I do/did not go there.

So far, the basics of the negative forms and the finite suffixes which attach to the negative elements have been described.

Further, the finite suffixes occur after modal verbs. These verbs, e.g. *teri* 'know', *muTi* 'be able', *kuuTu* 'be possible', attach directly to the finite suffix *-um* to generate affirmative verb forms. The modal verbs in negative have the negative suffix between the finite suffix *-u* and the verb stem. The affirmative and negative forms of the modal verbs are given in 18.

18.		Affirmative		Negative
	obligation	veen(T)um	must	veen(T)aam veenTaam
	ability	muTiyum	can	muTiyaatu
	possibility	-laam ⁵	may/let's	--
	permission	-laam	is permitted	--
	permission	-TT	may/can	--
	ability (passive)	eelum	can	eelaatu
	probability	kuuTum	can,	kuuTaatu

These forms, their properties and irregularities are not pursued here as they are described in 6.2.1.

To summarize, it is observed that the finite suffixes appear after the modal and negative forms. The latter two are similar in several respects. They express time references regardless of the fact that tense suffixes do not appear in them. Also, these verbal constructions do not precede agreement suffixes, unlike main verbs. Further, these forms immediately follow infinitival phrases. Having given this basic information, I turn to discuss the syntactic behaviour of finite and negative morphemes next.

5.2. Finite suffixes as functional heads

In this section, first the finite suffixes are characterized as functional heads, and subsequently their derivation is illustrated assuming the order of morphemes, e.g. [VERB-TENSE-FINITNESS-AGREEMENT] given in 85, chapter 4. One of the advantages of this analysis is that it shows how the structure of morphemes in a word reflects the syntactic structure.

⁵. -laam with an infinitival phrase is segmented in different ways. Lehmann (1989:215-216) divides the verbal form *pookalaam* as *pookal-aam* 'going-may'. Steever (1993:197) finds that historically it is *pook-al-aam* 'going-may-occur'. He assumes, with reference to the Dravidian Etymological dictionary (Burrow & Emeneau (1984:33), that -aam is the compressed form of *aakum*. He describes the historical development of this form in three stages,

var-al-aam > varal-aam > var-alaam

and proposes to add only *alaam* as the permissive suffix to the grammar. However, I assume -laam as the permissive suffix, as it is parallel to the structure of other modal verbs. See Asher (1982:170) for similar segmentation.

It has been noted in 5.1 that the finite suffixes, unlike agreement ones, do not attach to tense suffixes, but immediately follow verb stems. (The final suffix *-u* may follow the negative suffix *-aat*). When a finite suffix is added to a verb stem, the combination of the verb and the finite suffix cannot be interrupted, like the sequences of agreement and tense, tense and verb. This behaviour of the finite suffixes seems to be an indication that they require a verb as a stem to host them. Further, like other functional heads, they are bound forms; they also have a fixed position in a verbal form; they can head their own maximal projections. These characteristics of the finite suffixes are compatible with the criteria of determining functional heads, outlined in 3.2. Therefore, the finite suffixes are assumed to be functional heads.

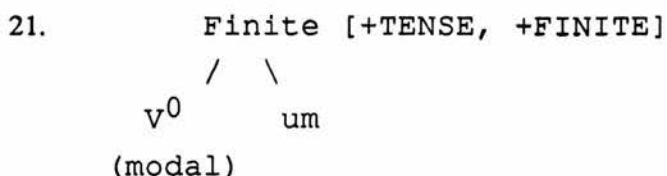
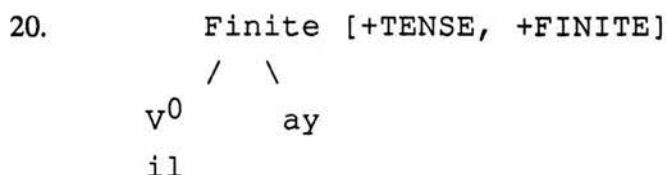
As functional heads, the finite suffixes are represented as trees in the functional lexicon. One peculiarity of these functional elements is that they have severe restrictions in selecting stem categories. As mentioned in 5.0, *-ay* selects only the negative verb *il* as its complement. Stem forms of *-um* are confined to modal verbs. *-u* selects either *iru* or *-aat* as its stem categories. It may also occur after the (past) tense form of the modal verb *muTi*, e.g. *muTincu* 'was able'. Another characteristic of finite verbal forms is that they express time reference, though they do not have overt tense suffixes. Thus, sentence 10, repeated here as 19, indicates past, present and (near) future (only in some cases) time references depending on pragmatics or on the time reference of the matrix sentence.

19. naan kaTay-ukku poo-k-a il-l-ay.
 I shop-DAT go-k-INFN not to be-l-FN
 I do/did/will not go to the shop.

Similarly, *-um* may imply present and future time references. Therefore, *-ay* and *-um* are assumed to be the syncretized morphs of tense and finite morphemes. This assumption can be supported by two other observations. (a) If tense suffixes are added to finite suffixes, it results in unacceptability. Unavailability of tense and finite suffixes in one form can be explained assuming the concept of Extended Projection (EP), given in 4.5. According to the EP multiple occurrences of a functional (affixal) category are not allowed within the same domain. The unacceptability of the finite suffixes in tensed forms reveals that the finite suffixes have a tense morpheme so that it cannot occur with another tense morpheme in the same verbal form. (b) It was assumed in 4.4.4 that tense and finite morphemes are realized adjacently. The verbal forms with the finite suffixes observe this order when the finite suffixes are hypothesized to be the syncretized forms of tense and finite morphemes. In other words, assumption that the finite suffixes consist of tense and

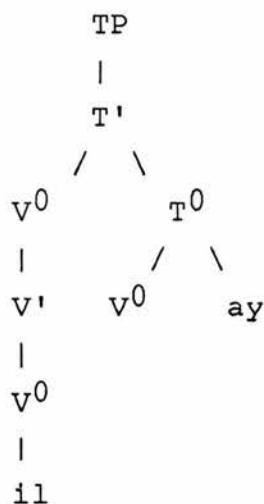
finite morphemes gives verbal forms with the finite suffixes the [VERB + TENSE + FINITE] order in parallel to that of verbs with agreement suffixes.

Once these suffixes are identified as the combination of two morphemes, they must be categorized according to the most distinguishable morpheme. As far as *-ay* and *-um* are concerned, they cannot be labelled as tense for two reasons. First, there is a separate set of tense suffixes. Second, *-ay* and *-um* cannot replace tense suffixes. Thus, these suffixes are categorized as finite, and the morphemes included are marked to the right of the category label. e.g.



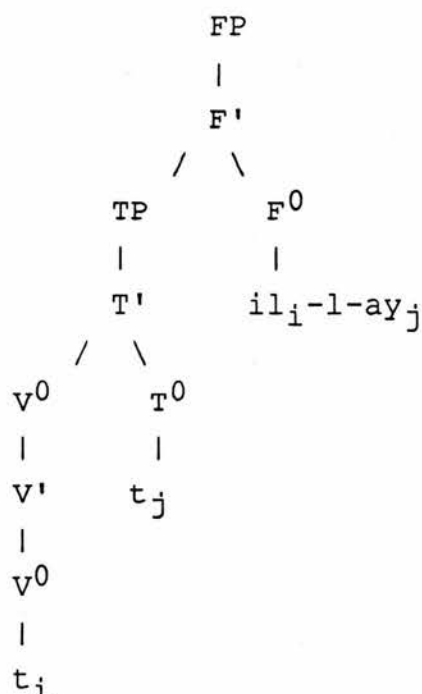
It was assumed in 4.4.4 that when a morph with syncretized morphemes projects into syntax, the morpheme that is consistent with the possible lowest position of the order, given in 85 in chapter 4, must be realized initially. Following this approach, the finite suffixes project tense morphemes first when they are in the syntax. When *-ay* is projected to the syntax, it is assigned a VP complement headed by *il* to satisfy the complement requirement of the finite suffix. This results in the tree in 22.

22.



This tree, like that of 39 in chapter 3, is not well formed as it does not satisfy the licensing principle, e.g. the PFLP, by having an unlicensed empty V^0 complement of T^0 . It also does not observe the MLH, given in 43 in chapter 3, according to which syncretized morphemes of a morph must head their own maximal projection. In order to fulfil the first requirement, *il* is raised to the V^0 complement position of *-ay*. This generates the surface form *illay*. Nevertheless, it is not syntactically well formed as all morphemes included in *-ay* have not licensed their properties in maximal projections. Thus, the verbal form is not able to receive Full Interpretation. Therefore, invoking the approach described in 4.4.4.2 for licensing morphemes of agreement suffixes, an FP is created dominating TP and the whole structure, e.g. *illay*, is moved to head this new node. This movement allows the finite morpheme to head its maximal projection observing the 'Morpheme Licensing Hypothesis'. This results in the structure in 23.

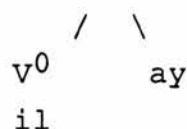
23.



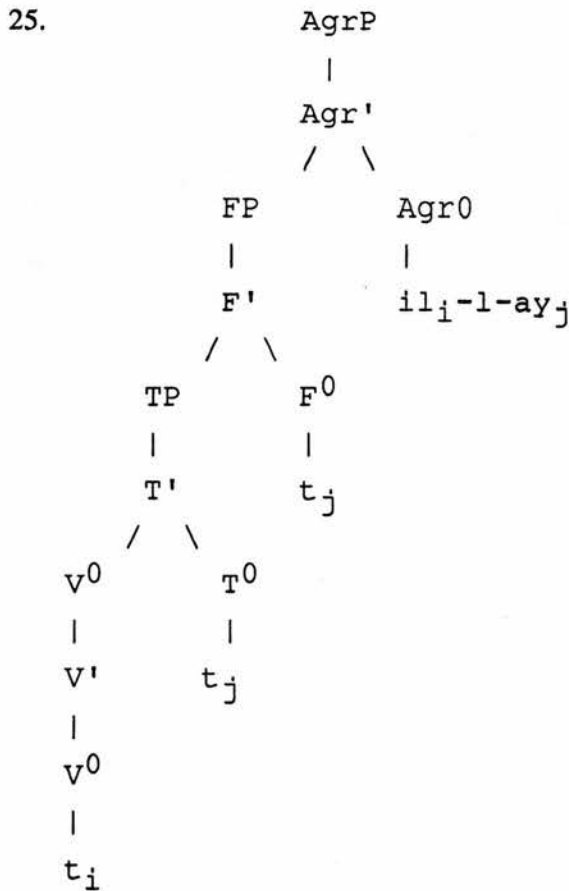
This syntactic structure appears to be well formed, at first glance. It has satisfied the PFLP and the MLH. Therefore, it can receive a full interpretation. Yet a closer look at the sentence with the finite suffixes reveals that they, unlike agreement suffixes, can have subject NPs regardless of person, number, and gender distinctions. This implies that the finite suffixes do not have an [+AGR] feature as a property. However, if the order of morphemes given in 85 in chapter 4 is a characteristic of a finite clause, the clauses with the finite suffixes also must observe that order. This means that the finite suffixes also contain [AGR], resulting in a parallel structure to all finite clauses with both agreement and finite suffixes. This shows that the finite suffixes also contain an agreement morpheme, though the latter has a different value. In other words, the finite suffixes are [-AGR]. Hence, the functional tree in 20 has to be modified including [-AGR] in its information structure.

24.

Finite [+TENSE, +FINITE, -AGR]



These observations indicate that the syntactic tree in 23 is not well formed since the agreement morpheme is not syntactically licensed. In order to rectify this flaw, an AgrP is created dominating FP, and the structure in F⁰ is raised into Agr⁰. e.g.



This derivation gives a well formed negative finite verb *illay*. One may, however, suggest considering *illay* to be a single lexical item and giving it a single entry in the lexicon since *-ay* is confined only to the negative verb *il*. This proposal is not desirable because *il* occurs, at least, in one more environment, namely preceding *-aat*, without *-ay*. Thus, the negative verb can be identified as a separate morpheme. Therefore, I consider that the complement selectional property of *-ay* must be lexically specified under its idiosyncratic properties.⁶

This section so far has characterized properties of the finite suffixes *-ay* and *-um*, and has illustrated their syntactic derivation. This analysis has also given evidence for two important claims that concern syncretism and licensing. The finite suffixes are the syncretized morphs of tense, finite and agreement morphemes. Thus, they add another

⁶. See 8.2.2.3 for more detail.

element to the group of syncretized morphs. Further, they exemplify that syntactic structures are built not only when the syncretized morphs project into syntax to generate basic sentence structures, but also structures are built during the syntactic derivation by means of creating additional structures to license individual morphemes.

This approach can further be supported through two more suffixes, namely, *-aam* and *-laam*. Section 5.1 has introduced *-laam* as a modal verb. *-aam* follows the modal verb *veen(T)u*.

26. *poo-k-a veenT-aam.*
 go-k-INFN necessity-NEG/FN
 X must not go.

27. *poo-k-a-laam.*
 go-k-INFN-possible/FN
 (We/he) can go.

These verbal forms, as finite forms, can precede the complementizer *-nnu*, and express non-past time reference. Compared to the properties of other finite suffixes, this behaviour of *-aam* and *-laam* implies that these verbal forms also have included tense and agreement morphemes in them. Thus, *-aam* and *-laam*, based on the parallel distribution, can be treated to be finite suffixes together with *-ay* and *-um*. However, the former two differ from the latter two by having additional properties. The *-aam* expresses negation of the modal verb *veen(T)u* 'must'. The negative meaning cannot be attributed to a morpheme included in the verb, because *veen(T)u* does not express negation in 28.

28. *poo-k-a veen-um*
 go-k-INFN necessity-FN
 X must go.

29. *poo-k-a veen-aam.*
 go-k-INFN necessity-NEG/FN
 X must not go.

In the literature on Dravidian linguistics, *-aa* has been assumed to be the negative

marker.⁷ If this hypothesis is taken for granted, *-aam* can be divided into two morphemes: *-aa* 'negative', *-m* 'finite' or 'tense and finite'. This kind of segmentation raises many problems. If *-aam* is segmented as [*aa* + *m*], one may analyze *laam* as *-l* 'modal' *-aa* 'negative' and *-m* 'finite', or 'finite and tense'. This analysis is not accurate since *-laam* does not express negation. Further, if *-m* is identified as [FINITE] or [TENSE, FINITE] morphemes, the final suffix *-um* also can be analyzed into two *-u* and *-m* with no semantic interpretation for *-u*. Therefore, *-aam* is treated as the syncretized morph of [+NEG, +TENSE, +FINITE, -AGR].

-laam deviates from *-aam*, because it does not have a negative morpheme. *-laam* occurs in the context in which other modal verbs occupy. In other words, like other modal verbs, *-laam* immediately follows an infinitival phrase. When the parallelism of contexts is considered it seems that *-laam* appears in the context of a verb. Therefore, it is assumed to be a verbal form. This form also implies non-past time reference and can precede the complementizer (*n*)*nu*. Comparing these properties with those of *-aam* and other finite suffixes, *-laam* can be characterized as the syncretized morph of [VERB, +TENSE, +FINITE, -AGR] morphemes.

-laam differs from other modal verbs, though it has been categorized as a verb. It, unlike other modal verbs, is suffixal in nature. Thus, it cannot occur without an infinitival phrase, unlike some other modal verbs, e.g. *muTi* 'can' or *eelu* 'possible', that may appear as complete utterance.

These two finite suffixes, like *-um* and *-ay*, are bound morphemes and always accompany a host category. In other words, *-aam* and *-laam* are suffixes which specify respectively a verb and an infinitival suffix as their syntactic complement. This property, together with others such as boundness and positional immobility, is consistent with the properties of functional heads. Therefore, these suffixes are also counted as functional heads, and are specified in functional trees in the lexicon.

This assumption can be further supported by two observations. First, *-laam* (*-aam* as well) is the syncretized form of tense, finite and agreement morphemes. Thus, it is reasonable to treat this suffix as a functional category, regardless of the fact that it substitutes the syntactic position of a verb. Second, although *-laam* occupies the syntactic position of a verb, it does not have verbal properties such as case and semantic roles. For example, the modal verb *muTi* assigns dative case (instrumental case in standard Tamil) to its subject. *eelum* has both nominative and dative cases to assign to its subject. Nonetheless, these syntactic properties seem to be absent from *-laam*. In 31, the subject

7. See 5.3. for some further details.

NP is case marked by the infinitival complement of *-laam*, though in other instances the modal verb, but not the verb in the infinitival complement, assigns case.⁸ e.g.

30. inta veela on-akku cey-y-a muTi-y-um.
 this work you/OBL-DAT do-y-INFN can-y-FN
 You can do this work.
31. inta veela on-akku cey-y-a muTi-y-a-laam.
 this work you/OBL-DAT do-y-INFN can-y-INFN-FN
 You can do this work. (You are able to do this work)

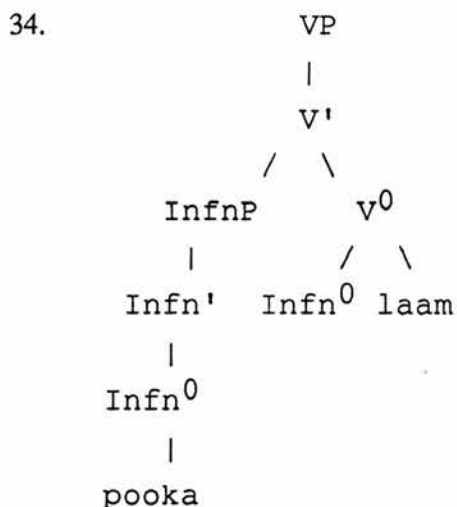
This observation is consistent with that of Steever (1993:197). He assumes that the [verb-*al*] combination has lost its verbal properties in the early modern period of the evolution of Tamil.

The finite suffix *-aam* has a severe restriction in complement selecting whereby it selects only *veen(T)u*. This irregularity, like that of *-ay*, is specified under the idiosyncratic properties of the F-tree.

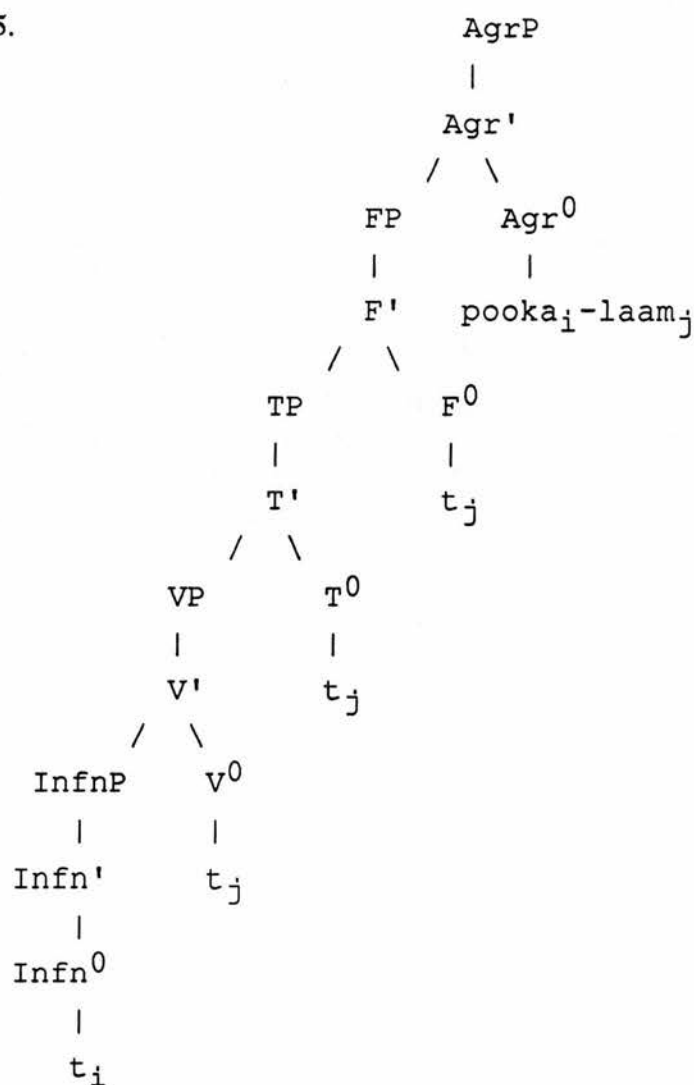
32. Finite [+TENSE, +FINITE]
 / \
 v⁰ aam
33. V [V, +TENSE, +FINITE]
 / \
 INFN⁰ laam

Accordingly, when *-laam* projects into syntax, it first heads a VP taking an infinitival phrase as the complement. e.g.

8. It is hard to examine this fact since the subject in nominative case can be argued to be case marked by either the modal verb or the verb in the infinitival phrase.



After this tree is formed the infinitival form moves to fill the stem category of v^0 to satisfy the selectional requirement of the suffix. This movement generates the verbal form *pookalaam*. This structure is not well formed as the morphemes included in *-laam* have not licensed their syntactic properties by heading a maximal projection. In order to meet the licensing requirements, a TP, FP and AgrP are subsequently created respectively dominating VP, TP and FP. As soon as each phrasal category is generated, the verbal form in question is moved to head that maximal projection, licensing the appropriate morpheme. These movements result in well formed *pookalaam*.



This derivation may seem to be an uneconomical one, but it allows all morphemes to satisfy the licensing principles, and to receive full interpretation. Another obvious advantage of this derivation is that it shows how the morpheme structure directs the syntactic structure, indicating the interaction between morphology and syntax.

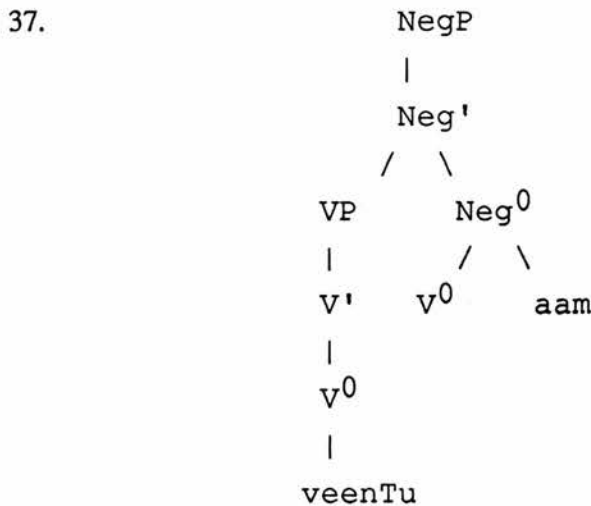
The finite suffix *-aam* differs from the suffixes discussed so far by having a negative morpheme in addition to tense, finiteness and agreement. This observation leads to a reconsideration of the order of morphemes in a word as the negative morpheme has not yet been analyzed. It has been observed that, at least in some cases, either the finite and agreement or the finite and tense (agreement as well) combine in single morphs. These combinations do not permit positioning the negative morpheme between either tense and finite morphemes or finite and agreement morphemes. One possible alternative

is to locate the negative morpheme before the tense morpheme. This leads to a modification of the order of morphemes, given in 85 in chapter 4, as in 36.

36. (verb)-NEG-TENSE-FINITE-AGR.

This order of morphemes correctly predicts the unavailability of a negative form of *-laam*. Obviously, that is because the negative morpheme cannot be inserted to *-laam* as the latter cannot be segmented. The negative suffix cannot attach to the end of *-laam* as the former requires a verb stem, but not [+/- AGR] category, as a complement. The negative verbs cannot follow *-aam* because both *-aam* and *il* have negative morphemes to project. If they are projected to the same syntactic structure, it results in a violation of the EP.⁹

Consequently, in a syntactic tree *-aam* is realized in a Neg^0 node. The reason is that, it was assumed in 4.4.4.2, suffixes with multiple morphemes project the morpheme which is consistent with the lowest possible morpheme of the linear order of morphemes first. In the syntax, the negative head, similar to other such instances, receives a VP complement as the functional head requires a verb stem to host it. These projections generate the tree in 37.

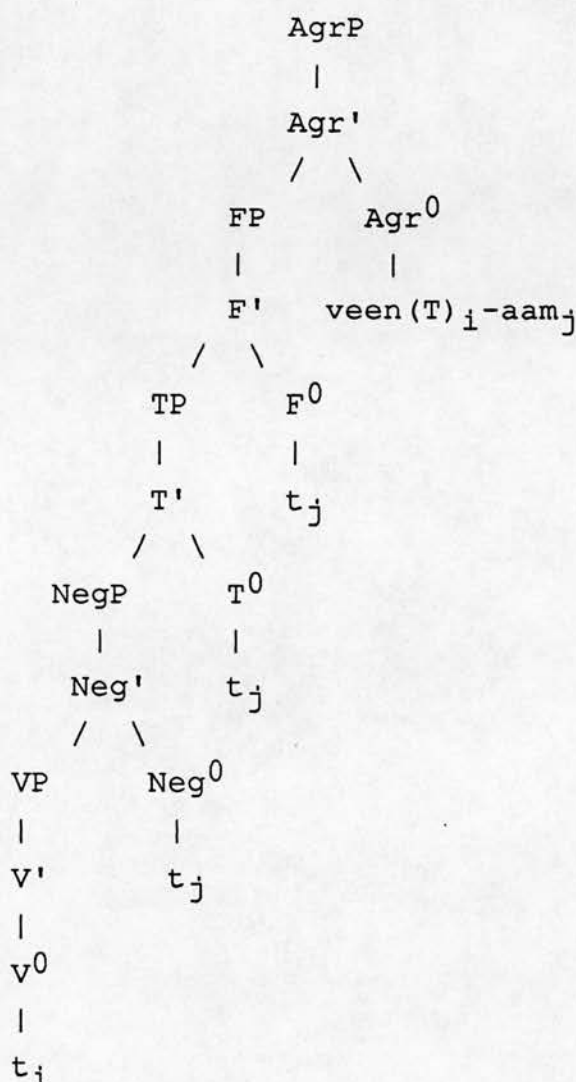


When this basic structure is completed *veen(T)u* is raised to the V^0 complement position of Neg^0 to license the empty V^0 complement of *-aam* resulting in the verbal form *veenTaam*. Yet the syntactic tree is not well formed since it does not provide necessary

⁹. I will discuss this issue later.

syntactic positions to license all the morphemes included in the suffix. Therefore, invoking the analyses illustrated before, *veen(T)aam* moves subsequently up to head TP, FP and AgrP nodes when they are formed, respectively dominating NegP, TP, FP. e.g.

38.



This derivation provides the well formed negative modal verb form *veenTaam*.

To summarize, by analyzing the finite suffixes, this section has examined two assumptions: (a) Some functional heads are multimorphemic, and (b) The order of morphemes guides syntactic structure, mirroring the parallelism between word and syntactic structure. These suffixes are syncretized forms of ((verb) negative) tense, finite and agreement morphemes. More interestingly the modal verbs *-laam* and *-aam*, in addition to *-u*, *-ay* and *-um*, have functional properties. When projected into the syntax, they form a basic tree and then create additional syntactic positions dominating the highest

existing node. The suffix in question moves to head these newly created maximal projections in order to license the relevant morphemes in their head positions. This approach is further developed with a discussion on negative forms, in the next section.

5.3. Negative forms as functional heads

In this section, the negative verb *maaTT* and the negative suffix *-aat* are analyzed. The claim to be made is that these two negative forms are syncretized forms of a few morphemes, and that they are functional heads. To begin with, I discuss the morphosyntactic properties of *-aat* and then, expand the discussion to an account of *maaTT*.

5.3.1. The negative suffix *-aat*

The negative suffix *-aat* has a few characteristics. It is a bound morpheme; its position in a word is fixed whereby it immediately follows a verb stem and precedes suffixes such as the finite suffix *-u*, the imperative suffixes *-a* and *-iinka*, and the adjectival suffix *-a*. e.g.

39. ammaa teeva il-l-aat-a peecc(u)-ellaam
 mothr necessary not to be-l-NEG/TENSE-ADJ
 speech-all peec-aat-iinka.
 speak-NEG/TENSE-IMP
 Mother, don't say unnecessary things.
40. kuTi-cc-aalum anta pulla caak-aat-u.
 drink-PAST-COND that girl die-NEG/TENSE-FN
 That girl didn't die even though she took poison.
41. anta-p pulla kol-l-aat-a.
 that-p girl kill-l-NEG/TENSE-IMP
 Don't kill that girl.
42. ooTTal caappaaTTu viiTTu caappaaTTu maatiri iru-kk-aat-u.
 hotel meal house/OBL- meal as if be-kk-NEG/TENSE-FN
 Food from the hotel is not like home made one.

43. anci naal veela cey-aat-a aal-ukku
 five day work do-NEG/TENSE-ADJ person-DAT
 The one who did/does/will not work,
44. ocaram il-l-aat-a maratt-ila
 life not to be-l-NEG/TENSE-ADJ tree/OBL-LOC
 In the dead (lifeless) tree,

The verb-*aat* combination cannot be interrupted, as in other similar instances, since *-aat* has a fixed position in a verbal form. The implication of this behaviour of *-aa(t)* is that it has selectional properties according to which it requires a V^0 stem category. Further, it is assumed that the negative suffix can also head its own maximal projection and can host a moved category. Moreover, it cannot be iterated (at least within the same phrase or clause). All these characteristics of *-aat* are consistent with the properties of functional heads, discussed in 3.2. As a result, *-aa(t)* is also identified as a functional head.

5.3.1.1. Categorical nature of *-aat*

When *-aat* is recognized as a functional head, the substance of this new category must be explained. At first glance, one may compare the final suffix *-u* preceded by *-aat*, to *-ay* and *-um*, and suggest that the negative suffix carries the negative morpheme, assuming *-u* to be the finite suffix with tense, finite and agreement morphemes. Nevertheless, the sentences in 39 and 41 provide counter examples to this assumption. Imperative suffixes *-linka* and *-a* agree with the second person pronouns. Like other agreement suffixes, they do not express time reference. If *-aat* is treated to be only the negative morpheme, the tense morpheme seems to be missing from these imperative forms. It is, however, not desirable to assume that *-aat* has two different behaviours, e.g. it expresses tense when it precedes the imperative suffix, but it implies only negation when it appears before *-u*. That is because such an assumption results in disjunction.

A clue to resolving this problem comes from the adjectival participle forms. It is observed that in the negative adjective participle clause in 44, the adjectival suffix *-a* is attached to the negative suffix. Yet it attaches to a tense suffix in affirmative verbal adjective forms, as shown in 45-46.

45. atu muTi-nc-a oTane,
 that finish-PAST-ADJ as soon as
 As soon as it was over,
46. veelay-kku poo-r-a neeram
 work-DAT go-PRES-ADJ time
 At the time (X) is going to work,

Obviously, the disparity between sentences 44 and 45-46 is that the negative adjectival phrase (or the negative relative participle) does not have an overt tense marker, but the affirmative one has.

47.	verb	NEG	TENSE	ADJ
	AFF-ADJ	paTi (kk)	-- ir	a
	NEG-ADJ	paTi (kk)	aat --	a

This indicates that the negative suffix is the syncretized form of both negative and tense morphemes.

Further evidence to support this observation is drawn from various sources. First, some other Dravidian languages have overt tense markers after or before the negative suffix. Andronov (1976, 1977), for example, describes instances of tense suffixes appearing in negative forms bringing examples from (Dravidian) languages such as Konda, Kui, Kuvi, Pengo, and Brahui. He reports that these languages have negative suffixes preceding or following tense suffixes. The South-Western group Onti Koraga, for instance, has five negative tenses.¹⁰ In this language, the present and present continuous tenses are negated by attaching the negative suffix *j* to the suffixes of present-future and present continuous tenses. Thus, the order of morphemes is [VERB-TENSE-NEG]. e.g

48. a. kuTT-uN-a.¹¹
 beat-PRES/FUTURE-AGR
 You (sg) (will) beat.

¹⁰. See Andronov (1976:5-11) for more details.

¹¹. These segmentations of the verbal forms and the glosses are mine. -*n* that precedes -*c* is the palatal nasal. For details see Andronov (1976:5).

- b. kuTT-uN-c-a.
 beat-PRES/FUTURE-NEG-AGR
 You (sg) do not beat.
49. a. kuTT-oN-a.
 beat-PRES/CONT-AGR
 We are beating.
- b. kuTT-oN-c-a.
 beat-PRES/CONT-NEG-AGR
 We are not beating.

In order to negate a verbal form in the past tense, the negative suffix *N* appears between the tense marker and the verb stem. This results in the [VERB-NEG-TENSE] order.

50. a. kuTT-ag-e
 beat-PAST/PERFECT-AGR
 I have beaten.
- b. kuTT-N-ag-e
 beat-NEG-PAST/PERFECT-AGR
 I have not beaten.

Thus, assuming that the negative suffix *-aat* is the syncretized form of both tense and negative morphemes is not a peculiarity in Tamil.

Second, Subramoniam (1959:35) points out that the negative and tense morphemes may occupy the same place in negative phrases. This may mean that the tense and negative morphemes are syncretized.

Third, it has been shown in 4.4.3 and 5.2 that suffixes in Tamil could be conflated forms of several morphemes. Thus, assuming *-aat* to be a syncretized form adds one more element to the group of syncretized forms.

This hypothesis correctly predicts the ungrammaticality of the verbal form in 51. It is unacceptable as there is more than one occurrence of the tense morpheme, as exemplified in 52. This violates the EP that disallows iteration of the same morpheme within a single domain. Further, if more than one instance of a functional head is projected to the syntax, these additional forms do not find enough syntactic positions in a syntactic tree to license their properties. This results in a violation of the licensing principles.

51. *il-aat-ay.
 not to be-NEG/TENSE-FN
52. * il -aat -ay
 [verb] [NEG/TENSE] [TENSE/FINITE]

All this evidence shows that *-aat* consists of tense and negative morphemes. Thus, they are specified in the functional tree for *-aat*. e.g.

53. Neg [+NEG, +TENSE]
 / \
 V⁰ aat

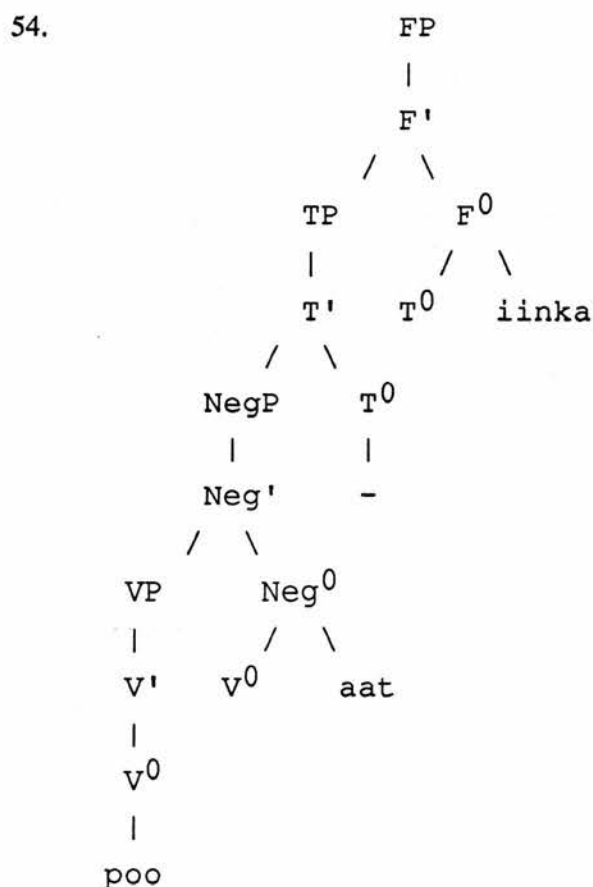
Identifying *-aat* as the syncretized morph of tense and negative morphemes resolves the problem that concerns characteristics of *-u*. As tense is assumed to be a property of *-aat*, now, *-u* can be recognized as the morph of [+FINITE, -AGR], in comparison with other finite suffixes.

5.3.1.2. Syntactic derivation of *-aat*

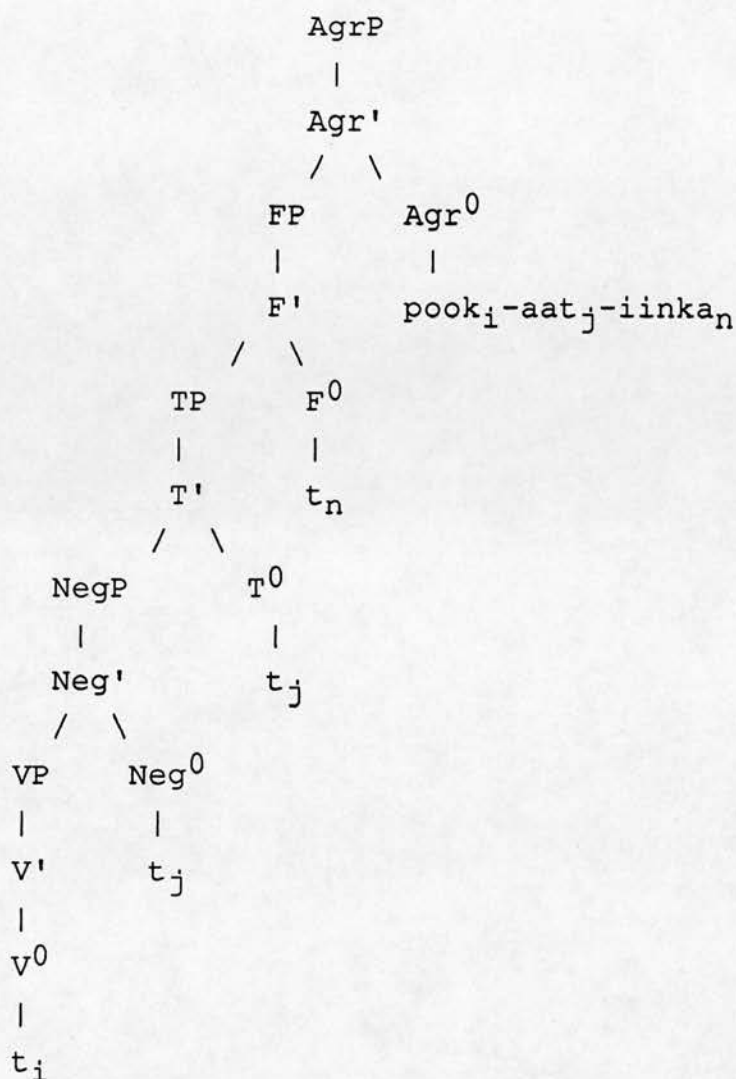
Formation of verbal forms with *-aat* exemplifies another instance of syntactic trees. All finite clauses that are illustrated so far have agreement and finite suffixes at the end of verbal forms. *-aat* deviates from them as it precedes the finite suffix *-u* or the adjectival participle suffix *-a*. Thus, the syntactic trees of verbal forms with the negative suffix are slightly different from those that have been formerly explained. This difference is described next through the derivation of *pookaatiinka*.

It has been noted that the order of morphemes in a word mirrors the order of projections. So *-iinka* realizes in F⁰ and receives a TP complement as it is specified for a tense stem category. TP must be headed by a tense suffix as maximal projections are the extensions of head categories. Nonetheless, during the formation of the negative verbal form, the T⁰ position is not filled with a tense suffix as the negative suffix which consists of a tense morpheme is due to project. This means that in an underived syntactic tree the T⁰ head is left empty. The negative suffix projects its negative morpheme first during the projection since it is consistent with the lowest position of the order given in 36. Neg⁰ is

accordingly assigned a VP complement as it requires a verb as the stem category. These projections generate the underived syntactic structure in 54 for *pookaatiinka*.



During the derivation, heads are moved to the complement position of the immediately dominating category. The verb moves to V^0 of Neg^0 . To satisfy the licensing requirement of tense morpheme, the resulting form *pookaat* is raised to T^0 to head TP and to license the tense morpheme. Accordingly, the verbal form in T^0 is raised to the stem node of F^0 . Finally, an AgrP is created dominating FP and the whole verbal structure is moved to head Agr^0 . This gives the well formed negative verbal form *pookaatiinka*, illustrated in 55.



5.3.2. The negative verb *il*

Thus far, I have identified the negative suffix as a functional head with tense and negative morphemes, and illustrated its syntactic derivation. During the discussion it has been observed that *-aat* follows verb stems. This may lead one to wonder whether it occurs even after the negative verb *il*. If *-aat* appears after *il*, then seemingly, it undermines the EP that prohibits multiple occurrences of a single morpheme within a single domain. If the negative suffix cannot follow the negative verb, it may imply the former has some idiosyncrasies. This issue is significant not only because it shows the behaviour of negative forms, but because it also sheds light on verb morphology in general.

In theory, if *il* is a verb and *-aat* requires a verb as the stem category, it predicts that the occurrence of *il-aat* is acceptable. Nevertheless, if both have a [+NEG]

morpheme, then the *il-aat* combination is unacceptable as it violates the EP. Interestingly, examples in 56-59 show that in 57 *il-aat* is acceptable, but not in 59.

56. pullay-kku kaacu il-l-ay.
 girl-DAT money not to be-l-FN
 The girl does not have money.
57. kaacu il-l-aat-a pulla
 money not to be-l-NEG/TENSE-ADJ girl
 The girl who does not have money
58. pulla ckuul-ukku poo-k-a il-l-ay.
 girl school-DAT go-k-INFN not to be-l-FN
 The girl does/did not go to the school.
59. * ckuul-ukku poo-k-a il-l-aat-a pulla
 school-DAT go-INFN not to be-l-NEG/TENSE-ADJ girl
 The girl who does/did not go to school

At first sight, these examples show that the occurrence of *il-aat* is rather complex. Yet a closer look shows that in 56-57 *il-l-ay* and *il-aat* appear following an NP whereas in 58-59 they follow an infinitival phrase. Lehmann (1989:229-231) correctly identifies this behaviour of *il*. According to him, there are two negative verbs: one is the lexical negative verb that negates locative, existential and copula expressions. The other acts as an auxiliary, and negates infinitival clauses. Hence, *-aat* attaches to the lexical *il*, as it accompanies any other (main) verb, because sentences with lexical *il* do not have any other (main) verbs which *-aat* can attach to. The opposite is true for the auxiliary *il*. The negative suffix attaches to a stem of a main verb if the latter precedes the auxiliary *il* in a finite clause.

I, however, observe that the auxiliary *il* has mixed properties. It can be characterized as an auxiliary or non-lexical based on the morphological irregularities. It does not precede negative, tense and agreement suffixes as exemplified by 58-59. Also, the auxiliary *il*, unlike the lexical one, does not have non-finite forms.¹²

12. See 6.2 for further details.

Interestingly, the auxiliary *il* has a reduced form *-l* which appears as a bound form following an infinitival phrase. e.g.

60. poTiyān innaykku var-a-l-a (vara il-l-ay).
 boy today come/OBL-INFN-not to be-FN
 The boy does not come today.
61. antak kata peeru taan
 that story name FOCUS
 teri-y-a-l-a (teri-y-a il-l-ay)
 know-y-INFN-not to be-FN
 It is the name of the story that I don't know.
62. at-a en-akku ippa elupp-a muTi-y-a-l-a (muTi-y-a-il-l-ay)
 it-ACC I/OBL-DAT now wake up-INFN be able-y-INFN-not to be-FN
 I cannot wake it up now.

As a result, in syntax, *-l* closely associates with the preceding infinitival phrase and cannot be interrupted by attaching other suffixes. Therefore, when there is a necessity to emphasize negative forms with the auxiliary *il* the infinitival phrase is duplicated and the emphatic marker is attached to the infinitival phrase to the far left. e.g

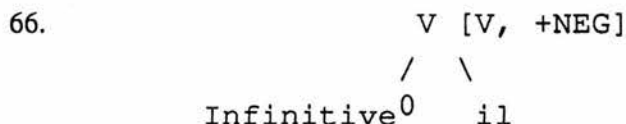
63. naan poo-n-a maacam palli-kku poo-k-a-l-a.
 I go-PAST-ADJ month school-DAT go-k-INFN-not to be-FN
 I didn't go to school last month.
64. naan poo-n-a maacam
 I go-PAST-ADJ month
 palli-kku poo-k-a-v-ee poo-k-a-l-a.
 school-DAT go-k-INFN-v-EMP go-k-INFN-not to be-FN
 Absolutely, I didn't go to school last month.

Nevertheless, the full form of the auxiliary *il* occurs as an independent form.

65. innum en-akku paci var-a-v-ee il-l-a(y).
 still I/OBL-DAT hunger come/OBL-INFN-v-EMP not to be-l-FN
 I didn't get hungry yet.

5.3.2.1. Categorical nature of *il*

Once the *il* preceded by an infinitival phrase is assumed to be an auxiliary, the categorial nature of it must be explained. First, if there are only two lexica, namely the F-lexicon and the C-lexicon, then this auxiliary must belong to one or the other of these two lexica. It is observed that auxiliary *il* is not lexical. Thus, the alternative is to consider it to be a functional head. Second, this verb appears after an infinitival phrase like modal verbs and the negative verb *maaTT*. Hence, it is considered to be a verb, despite the fact that it is taken to be suffixal in nature. Further, it is also assumed that the auxiliary *il* does not have lexical meaning 'not to be', but it has a syncretized negative morpheme. Thus, the functional tree for *il* is as in 66.¹³



When lexical and functional *il* forms are distinguished, the complexity and the contradiction related to the *il-aat* combination can easily be solved in a principled way. In 57, *-aat* attaches to the lexical *il* as there is no iteration of the same feature or morpheme. In other words, *il* in this instance is a verb, similar to any other main verb. It has only lexical semantics. Nevertheless, the functional *il* is the syncretized form of the verb and negative morpheme. Therefore, *-aat* cannot follow the functional *il* as this results in the iteration of morphemes within the same domain. Thus, *il-aat* is not permitted in this instance as in 59 since it violates the EP.

13. This assumption seems to be rather vague at first sight, but it can be explained considering the instances where lexical forms have changed to grammatical forms and grammatical forms which have additional features. In Tamil, the complementizer *((e)n)nu* is the participle form of *en* 'say', but when it appears to be the complementizer its lexical meaning disappears, and a grammatical feature emerges. In English, the determiner *the* has the feature [+DEFINITE] though the latter is not realized in a separate syntactic node. Similarly, when the lexical negative verb *il* behaves as an auxiliary it loses its lexical meaning together with other lexical properties, but the negation remains as a feature.

5.3.3. The negative verb *maaTT*

This analysis can be expanded to an account of the negative verb *maaTT* as well. One peculiarity of this verb is that it can directly attach to agreement suffixes. It expresses future time reference and negation, even though the *maaTT*-Agr construction does not have tense and negative suffixes. Further, it appears in a syntactic position where the negative verb and modal verbs occupy. In other words, it follows an infinitival phrase. Therefore, *maaTT* can be accounted for another instance of syncretized morphemes where verb, negative and tense forms have combined in one form.

One may question this assumption with reference to the direct negation in Tamil. These negative constructions have agreement suffixes directly attach to the stems of main verbs to express negation. This type of negative form has been analyzed in different ways by the researchers on Dravidian linguistics.¹⁴ Caldwell (1856), for example, states that "the absence of signs of tense appears to contribute to the expression of the idea of negation; it may at least be said that it precludes the signification of the affirmative." (P. 369). According to this view, absence of tense suffixes in a verbal form indicates negation. If this is true, one can argue that the tense markers have an affirmative or indicative feature. Yet this assumption may not be correct. That is because directly negated forms express future time reference indicating that they have tense properties. Andronov (1976) reports that some of the Dravidian languages have tense and negatives inside the agreement markers and some others such as Koda, Toda, Kannada have a zero negative morpheme in the same position. Master (1946) also suggests a zero morpheme as one type (out of four) of negation.¹⁵ If these approaches are correct, the direct negative forms can be argued to have a zero morpheme that contains negative and tense morphemes. This results in the structure [verb + 0 [=NEG, TENSE] + AGR] for direct negatives.

This proposal is not desirable since the agreement suffixes occur only after tense suffixes. In other words, the agreement suffixes follow suffixes that have specific time references. Thus, assuming a zero suffix with unspecified tense properties is not consistent with the rest of the paradigm. As an alternative, two zero suffixes for the

14. Arden (1942:228) calls them "pure negative tense", and Lehmann (1989:68-69) characterizes them as "negative indicative forms". These forms are mainly confined to old/classical Tamil. They are also used by the native speakers of the Jaffna Dialect of Tamil. See Gair et. al. (1978:225).

15. For some details, see Andronov (1976, 1977), Master (1946), Lehmann (1989) Subrahmanyam (1971) and Pederson (1991), among other.

negative and tense morphemes can be proposed, and the latter can be specified for [+FUTURE]. This hypothesis, in particular the notion of empty [+FUTURE] tense morpheme, seems interesting as directly negated verbal forms express future time reference.¹⁶

Assuming empty categories, however, is excluded from the analysis of *maaTT* for four reasons. First, assuming zero suffixes in this instance is problematic to the approach developed so far. Thus far, in the present analysis phonetically covert morphemes have been considered to be syncretized in the suffixes in question. If zero morphemes are proposed for the derivation of *maaTT*-Agr, it can be argued that Tamil has zero morphemes for all functional categories such as negative, tense, finite, agreement. This results in complexity in the grammar. Second, and more importantly, null morphemes are problematic to the PFLP since the latter requires all X^0 nodes to be filled by either a phonetic material or by a trace of a moved category. Zero suffixes do not satisfy any of these requirements. Third, if zero categories are suggested, they must have a complement node similar to that of the functional categories. This is because otherwise there is not a syntactic position to which moved elements can attach during the derivation. If the movement is taken to be an instance of adjunction in this case, it results in a peculiarity because all the other movements so far are considered to be substitutions. Fourth, in ET, unlike in many other Tamil dialects, directly negated verbs are not found. Therefore, tense and negative morphemes are assumed to be included in *maaTT*.

Further, the sentences 6 and 11, repeated here as 67-68 show that *maaTT* follows an infinitival phrase, in parallel to the negative (functional) verb *il* and modal verbs.

67. naan poo-k-a maaTT-een.
 I go-k-INFN will not-1/SG
 I shall not go.

68. naan kaTay-ukku poo-k-a maaTT-een.
 I shop-DAT go-k-INFN will not-1/SG
 I shall not go to the shop.

Hence, *maaTT* is also treated to have verbal properties, similar to the modal verb *-laam* and the negative auxiliary verb *il*. These hypotheses indicate that *maaTT* is the syncretized form of verb, negative and tense (Future) morphemes.

¹⁶. See Gair et. al. (1978:225-226) for details on direct negation.

maaTT is similar to the functional *il* in that it follows an infinitival phrase. Also, it does not precede tense or negative suffixes and does not have non-finite forms.¹⁷ Accordingly, it also can be characterized to be an auxiliary. Nevertheless, *maaTT* differs from (the auxiliary) *il* by being able to receive agreement suffixes. Also, the former has an optional variant of emphasized structure where the emphatic marker *-ee* and the inclusive suffix *-um* appear between the infinitival phrase and *maaTT*.

69. avan naan con-n-a-t-ay keek-k-a-v-ee
 he I tell-PAST-ADJ-PNOML-ACC listen-k-INFN-v-EMP
 maaTT-aan.
 will not-3/SG
 He will never listen to what I said.
70. aalu-nka porattu-kk-a-v-um maaTT-aanka.
 person-PL tolerate-kk-INFN-v-INCL will not-3/PL
 People will also not tolerate (such things).

This behaviour may prevent one assuming *maaTT* as a functional head because it has been assumed that F-heads and their complements cannot be interrupted. Yet this form cannot be treated as a lexical item since it does not appear independently. Therefore, following Emonds (1985), who proposes that all forms must be either lexical or grammatical, *maaTT* is assumed to be a functional head.

71. V [V, +NEG, +TENSE]
 / \
 Infn⁰ maaTT

Characterizing *maaTT*, in parallel to the functional *il*, as a functional head provides an explanation for the ungrammaticality of the phrase in 72.

¹⁷ Uma Sunthar Tissanayakam, one of my consultants from Jaffna dialect of Tamil, points out that in JT *maaTTaata* is acceptable. Also, Arden (1942, section 507:iii) notifies *maaTTaata* as the negative adjectival form. Yet I have not come across this form in ET, and do not take it into account here. Occurrence of *maaTTaata* in JT is expected as in this dialect, unlike in ET, there is direct negation. It seems, then, that for JT and other dialects of Tamil where the direct negative forms occur a zero morpheme may be necessary.

72. *poo-k-a- maaTT-aat-a
 go-k-INFN will not-NEG/TENSE-ADJ
 One who will not go

This structure is unacceptable, because *maaTT* and *-aat* are in the same domain and project two instances of negative and tense morphemes, violating the EP.

Properties of the negative suffix and the negative verbs have been discussed so far. It has been illustrated that *-aat* and *maaTT* are the syncretized morphs of several morphemes such as verb, negative and tense. *maaTT* and *il* are observed to have properties of functional heads.

5.3.4. Collocational restrictions of *-aat*

The discussion so far indicates that *-aat* and *maaTT* consist of negative and tense morphemes, but only *maaTT* precedes agreement suffixes. Thus, one may inquire as to the reason for the fact that *-aat* cannot precede an agreement marker. In theory, it appears that agreement suffixes can follow *-aat* since the latter can satisfy the complement requirement of the agreement suffixes by having a syncretized tense morpheme. Empirically, however, the occurrence of an agreement suffix following *-aat* is not acceptable. e.g.

73. *naan puttakam paTi-kk-aat-een.
 I book study-kk-NEG/TENSE-1/SG
 I do/did not study.

This behaviour of *-aat* and agreement suffixes exemplifies an assumption made before. That is, the agreement suffixes require suffixes with a specific time reference as complements. For instance, the agreement suffixes attach to the tense suffixes and *maaTT* as they have a definite time reference. Nevertheless, the time reference of *-aat*, as evident from 74, depends on either the time reference of the matrix verb or pragmatics. e.g.

74. anci naal veela cey-aat-a aal-ukku
 five day work do-NEG/TENSE-ADJ person-DAT
 To the one who did/does/will not work for five days

This explains the unacceptability of the V-*aat-^{een}* combination. That is, the agreement suffixes are not attached to *-aat* since the time reference of the latter is unspecific. Tense suffixes cannot be added to *-aat* to avoid this difficulty, because such an instance results in the iteration of the same feature within a single domain, violating the EP.¹⁸ Thus, the verb form in 75 is ruled out.

75. * paTi-kk-aat-ir-^{een}.
 study-kk-NEG/TENSE-PRES-1/SG
 (I) do not study.

These observations indicate that the tense morpheme in *-aat* has to be specified as neuter or weak and the complement category of Agr⁰ must be specified as [+Specific or Strong].¹⁹ e.g.

76. Neg [+NEG, +TENSE (Neuter)]
 / \
 V⁰ aat

77. Agr [+FINITE, +AGR]
 / \
 T⁰ ^{een}
 (+Strong)

To summarize, this section has illustrated properties and derivations of finite and negative forms. It has been observed that these elements are syncretized forms of several morphemes. *il* and *maaTT* are characterized to have properties of functional categories. Subsequently, syntactic derivation of these verbs and suffixes was illustrated to exemplify

18. In this case, the imperative (polite form) behaves differently. It can be attached to the negative suffix, e.g.

paTi-kk-aat-iinka.
 study-kk-NEG/TENSE-IMP
 Please, don't study.

This shows that the imperative suffix differs from the second person agreement marker *-iinka*.

19. For a similar approach see Chomsky (1992).

further the hypothesis that the morpheme structure of the verbal and nominal forms depicts the syntactic structure.

5.4. Non-finite clauses

In 4.0, two types of clauses, namely, finite and non-finite, were introduced. The verbal forms in finite clauses have so far been described, those in non-finite clauses have not been touched upon yet. Thus, the following section illustrates non-finite verbal forms such as infinitives and participles.

5.4.1. Infinitives

Infinitives are formed by adding the suffix *-a* to a verb stem.²⁰ For example,

78.	a.	paTi - a	paTi-kk-a	to study
		naTa - a	naTa-kk-a	to walk
		ciri - a	ciri-kk-a	to smile
		paTu - a	paTu-kk-a	to sleep
	b.	vil - a	vik-k-a	to sell
		keel - a	keek-k-a	to ask
	c.	elutu - a	elut-a	to write
		alu - a	al-a	to cry
		ceeru - a	ceer-a	to join
		eemaaru-a	eemaar-a	to get cheated

When the infinitival suffix *-a* attaches to the verb stems in group (a) and (b), a semantically empty *-k* is inserted inbetween the stem and the infinitival suffix. In (b), the stem final consonant assimilates with *-k* whereas in group (a) *-k* is doubled. It may be the case that these verbs, as Christdas (1988) hypothesizes, have an extra skeletal in their syllable structures.

Researchers, however, are not in accord on what the infinitival suffix is. Lehmann (1989) suggests *-a* as the infinitival marker for all verbs. Christdas (1988:431ff) proposes *-ka* and *-a* respectively for strong and weak verbs. She, as mentioned in 4.3.1., identifies

²⁰ See Arden (1942:196-199), Gair et. al. (1978:20, 60) Schiffman (1979:22) Asher (1982:175) Lehmann (1989:71-72). According to Lehmann and Arden the infinitival suffix is *-a* whereas others consider it to be *-kka* for strong verbs and *-a* for weak verbs.

the verbs in the first category (strong verbs) to have an extra skeletal structure. This property of these verbs, in her theory, initiates gemination of the initial consonant of the infinitive marker. This results in two different surface forms for those in group (a) and (c). For example,

79a. ceer + ka (transitive)
 ceer + k + ka
 cee(r) + k + ka > ceekka

b. ceer + a (intransitive)
 ceer + a
 ceera

In example (a), the suffix initial obstruent has spread to the extra skeletal C, and the final consonant of the verb stem is deleted (i.e. ceer-k-ka > ceekka).

The difference between these two proposals is that Christdas includes *-k* in one of the suffixes, but not in the other. Lehmann treats this *-k* as an augmented consonant. In 4.3, I excluded *-k* from the present tense suffix as it occurs preceding several other suffixes in addition to its presence in the present tense verbal form. In the same spirit, I treat *-a* to be the infinitival suffix with the exclusion of *-k*.

A piece of supportive evidence for this claim comes from negatives. When the negative suffix *-aat* is added to a verb in group (a) and (b) there appears a *-kk* or *-k*. e.g.

80. poo-k-aat-a
 go-k-NEG/TENSE-ADJ
 ((X) who) does/did not go

81. paTi-kk-aat-a
 study-kk-NEG/TENSE-ADJ
 ((X) who) does/did not study

In these examples, there is no basis to propose *-kaat* or *-kkaat* as negative markers. One alternative is to assume that the infinitival suffix is *-ka* or *-kka* and that *-aat* is attached to the infinitive of the verb.²¹ e.g.

²¹. See Asher (1982:32, 176).

82. *poo-ka-aat-a*
 go-INFN-NEG/TENSE-ADJ
 ((X) who) does/did not go

This assumption can be questioned, invoking the fact that the emphatic suffix *-ee* attaches to an infinitival form, as exemplified in 83. For instance, the emphatic form of *muTi* 'can', given in 84, shows that the infinitival form of *muTi* is *muTiya*, but not *muTika*.

83. *poo-k-a-v-ee poo-k-aat-u.*
 go-k-INFN-v-EMP go-k-NEG/TENSE-FN
 Absolutely X does/did not go.
84. *muTi-y-a-v-ee muTi-y-aat-u.*
 can-y-INFN-v-EMP can-y-NEG/TENSE-FN
 Absolutely cannot.

This observation gives evidence that the infinitival suffix is *-a*, but not *-ka*. Further, the modal verb *veenTu* attaches to *-aat*, though it does not have an infinitival form. For other verbs, the infinitive suffix *(k)a* and the initial vowel of *-aat* cannot be distinguished separately when these two suffixes appear adjacently. That is because according to the sandhi rules, [a + aat] becomes [aat], rather than [aaat]. Therefore, it is hard to detect whether *-aat* attaches to the infinitival form of a verb or to the verb stem, and to test whether the alternative view is correct. It must be noted that in 5.3.1.1 and 5.3.4, I argued that the negative suffix is a functional head with a verbal complement. In other words, *-aat* is attached to a verb stem, but not to the infinitive form of a verb. This implies that *-k* (or *-kk*) is a part of the stem of a verb. As a result, I claim that *-a* is the infinitival marker.

Infinitives occur in several contexts. They are found preceding modal verbs 85-86, perception verbs like *paar* 'see', *nenay* 'think', *poo* 'go' 87-88, manipulative verbs 89, negative verbs and the negative suffix 90, predicative nominals such as *virumpu* 91, adverbial clauses that indicate purpose, time, cause, and result 92-94.²²

22. Some of these have already been discussed.

85. anta puttakatt-a on-akku tar-a-laam.
that book/OBL-ACC you/OBL-DAT give/OBL-INFN-FN.
X can give that book to you.
86. naan ankee poo-k-a veen-um.
I there go-k-INFN necessity-FN
I must go there.
87. ankee poo-k-a nenay-kk-ir-een.
there go-k-INFN think-kk-PRES-1/SG
I think of going there.
88. avar kaar onnu vaank-a poo-r-aar.
he car one buy-INFN go-PRES-3/SG/HP
He is going to buy a car.
89. kumaar-a var-a-c con-n-een.
Kumar-ACC come/OBL-INFN-c tell-PAST-1/SG
I told Kumar to come.
90. naan poo-k-a il-l-a(y).
I go-k-INFN not to be-1-FN
I do not go.
91. naanka kolumbu-kku poo-k-a viruppam.
we Colombo-DAT go-k-INFN like
We like to go to Colombo.
92. appaa en-n-a paak-k-a va-nt-aar.
father I/OBL-n-ACC visit-k-INFN come-PAST-3/SG/HP
My father came to visit me.

93. kumaar tuun-k-a raajaa paTi-cc-aan.²³
 Kumar sleep-k-INFN Raja study-PAST-1/SG
 While Kumar was sleeping Raja studied.
94. rettam var-a kumaar
 blood come/OBL-INFN Kumar
 en-n-ay aTi-cc-aan.
 I/OBL-n-ACC beat-PAST-3/SG/MAS
 Kumar beat (punched) me so hard that blood came.

5.4.1.1. Properties of infinitives

Infinitives, and non-finite suffixes in general, have several properties. It was mentioned in 4.0 that non-finite clauses do not precede complementizers. Obviously, they are [-FINITE] as they are always realized embedded in a sentence.

With regard to the infinitival suffix, one issue remains to be addressed. That is, whether the infinitival suffix has tense properties or not. One possibility is to assume that the infinitival suffix does not have a syncretized tense morpheme, because time reference of infinitival phrases depends on the time reference of the matrix verb. Supportive evidence comes from the negative suffix *-aat* which has a syncretized tense morpheme. In this instance, the negative suffix may have a different time reference that differs from that of the matrix clause. In other words, the time reference of *-aat* does not necessarily depend on that of the matrix verb.

95. anci naal veela cey-aat-a aalu-nka inkee
 five day work do-NEG/TENSE-ADJ person-PL here
 var-u-v-aanka.
 come-u-FUTURE-3/PL
 The people who did/do/ not work for five days will come here.

Compared to the negative suffix, the infinitive suffix can be assumed not to have tense properties because it does not have an independent time reference. This means, then, that it has only a [-FINITE] property.

²³. Examples 93-94 are due to Lehmann (1989:261), but my consultants agree that they use these constructions.

Example 96 is rather problematic for this assumption since it has a nominative case marked subject NP. The nominative case of the subject of the main clause, e.g. *avan*, can be assumed to have been assigned by [+/- FINITE] in order to maintain the assumption that the infinitival suffix does not have tense, which is another possible case assigner.²⁴ Yet the nominative case marked noun in the participial noun, which is the agent of the input verb *col* 'say', in 96, is a counter examples to this hypothesis.

96. *avan naan con-n-a-t-ay keek-k-a-l-a.*
 he I say-PAST-ADJ-PNOML-ACC listen-k-INFN-not to be-FN
 He did/do/not listen to what I said.

It is obvious that the noun phrase does not have [-FINITE] features, but it only contains a verb, a tense suffix, the adjectival suffix and a nominalizer. This implies that tense assigns nominative case. If this assumption is correct, it indicates that the infinitival suffix is the syncretized form of the tense and [-FINITE] morphemes and that the tense morpheme assigns the nominative case.

It is apparent that the infinitive suffix immediately follows the verb stem without which it cannot be realized. When these facts, e.g boundness and the intimate relationship between the verb stem and the infinitival suffix, are taken into account the infinitival suffix also can be considered to be a functional head with a verb stem. e.g.

97. Inf n
 / \
 v⁰ -a

The derivation of infinitival forms are not particularly illustrated here, as the formations of these forms are not different from the ones discussed so far. Thus, in the next section, I turn to describe participle forms.

5.4.2. Participles

Participles in Tamil are of two types: Adjectival participles and verbal participle.²⁵ Preliminaries of these two categories are sketched below.

²⁴. Tait & Cann (1990:215) propose that [+FINITE] assigns nominative case.

5.4.2.1. Adjectival participle

Adjectival participles, as the name indicates, function as adjectives, modifying nouns and nominal suffixes. They consist of a verb stem followed by tense and adjective suffixes. These forms are peculiar because they are the only non-finite forms that take tense suffixes. e.g

98. veelay-kku poo-r-a neeram
 work-DAT go-PRES-ADJ time
 At the time one is going to work
99. naan cey-t-a ellaam paavam.
 I do-PAST-ADJ all sin
 All I did was sin (or I offended you in many ways).

The future adjectival participle is expressed by adding *-um* to a verb stem.

100. kolumb-ukku poo-k-um/poo-r-a bas
 Colombo-DAT go-k-FUTURE/go-PRES-ADJ bus
 The bus that will go to Colombo

Some peculiarities that concern the future adjectival participle must be noted here. ET speakers employ the present tense suffix to express future time reference more often than the *-um* adjectival form. *-um* form does not precede human nouns. ET also does not use the adjectival form with the future tense suffix *-p*. Thus, the unacceptability of 101.

101. * cey-p-a-van
 do-FUTURE-ADJ-PNOML
 * cey-p-a aalu
 do-FUTURE-ADJ person

In these two cases, adjectival forms with the present tense suffix are used.

25. See Lehmann (1989:75-76, 284-288, 339-347) and (72-73, 265-278) for details on adjectival participles and adverbial participles.

102. cey-y-ir-a-van
 do-y-PRES-ADJ-PNOML
 The one who will do
103. cey-y-ir-a aalu
 do-y-PRES-ADJ person
 The person who will do

It must be noted here that the adjectival participles are significant as they function as mediators (or a bridge) between verbal and nominal suffixes. As evident from 102-103, on the one hand, the adjective suffix requires a tense suffix to precede it. On the other hand, adjectival participles modify nouns or precede a nominalization suffix to form PNs. Thus, they have an important role in the formation of PNs which have both verbal and nominal suffixes, and are crucial to the present study of PNs, given in 7.2.

The adjectival suffix *-a* is a bound morpheme and never appears if a tense morpheme does not precede it. This shows that it needs a tense stem category. Thus, invoking the criterion of determining functional heads (3.2), the adjectival suffix is considered to be a functional head.

-um, the future adjectival suffix, however, does not follow a tense suffix, but a verb stem. Nevertheless, it expresses future time reference. This means that it is the syncretized form of tense and adjective morphemes.



Negative adjectival participles are formed by attaching the adjectival suffix to the negative suffix which follows a verb stem. As an analysis of the negative suffix *-aat* was presented in 5.3.1, the derivation of a negative adjectival participle form is not presented here separately.

5.4.2.2. Verbal participles

Verbal participles in Tamil have been introduced under different names; Asher (1982:176) and Schiffman (1979:68) describe them as adverbial participles. Christdas (1988:456) and Lehmann (1989:72) identify them as verbal participles; Arden (1942:199) uses both

names. These participles, as the notion 'adverbial participles' indicates, function as adverbials, and denote in which manner or at what time the acts or events expressed by the main clause take place. In example 105 the participle (phrase), (*naan viiTTukku*) *pooy* functions as a time adverb. e.g.

105. naan viiTT-ukku poo-y paaTam paTi-cc-een.
 I house/OBL-DAT go-PART lesson study-PAST-1/SG
 I studied the lesson after going home.
 (Having gone home I studied the lesson).

Thus, the term 'adverbial participle' seems to be the correct one since it implies the distinction between these participles and adjectival participles. One disadvantage of this term is that it obscures the morphological aspect of the form, though it makes explicit the function. Therefore, in order to show that these forms are derived from verbs, the notion 'verbal participle' is employed in the present work.

The works cited above assume that verbal participles contain verbs, tense suffixes and *-u* or *-i*.

106.	stem	gloss	past	participle
	naTa	walk	naTa-nt	naTa-nt-u
	taa	give	ta-nt	ta-nt-u
	vaa	come	va-nt	va-nt-u
	koTu	give	koTu-tt	koTu-tt-u
	paTi	study	paTi-cc	paTi-cc-i
	aTi	hit	aTi-cc	aTi-cc-i
	veTTu	cut	veTT-in	veTT-i
	col	tell	col-n	coll-i

Lehmann (1989:72) and Christdas (1988:459) treat word final *-u* in these forms as an enunciative vowel and suggest that the tense suffix has the function of the participial suffix. These hypotheses raise two questions: (a) are tense suffixes participle forms? (b) is the final *-u* or *-i* of a participle form an epenthetic vowel?

Lehmann and Christdas explicitly express that *-u* in a participle form is an epenthetic vowel and assume *-i* in some forms as an irregularity. At first sight, this claim seems to be correct, but a closer look reveals it is not true. In Tamil, at least in ET, the epenthetic *-u* occurs either word finally or between the stem final and suffix initial

consonants. In the former context, *-u* is optional, but in the latter it fills the gap between the verbal base and the tense suffix. e.g.

107. avar = avaru
 he he
108. var-u-v-aar
 come/OBL-u-FUTURE-v-3/SG/HP
 (He) will come.
109. * var-v-aar
 come/OBL-FUTURE-3/SG/HP

In example 107, *-u* is optional, and hence, can be dropped without affecting the meaning of the word. In 108, *-u* is not optional as it fills the gap. Therefore, it cannot be omitted as seen in 109. The *-u* in verbal participles is different from both these cases; it is not optional, and also, it does not function merely as an epenthetic vowel filling a gap.²⁶ This is exemplified by the unacceptability of *vant* in 111 and the unavailability of a word with the structure in 112.

110. va-nt-u
 come-PAST-PART
 Having come.
111. * va-nt
 come-PAST/ (PART).
112. * va-nt-u-CVC
 come-PAST-u-consosnat initial suffix

This negative evidence demonstrates that *-u* in the participle forms is not an epenthetic vowel.

²⁶ Christdas (1988) also observes that *-u* is obligatory. She proposes that *-u* in participles is the result of applying the epenthesis rule (EP) 1 to obstruent final tensed stems (ibid. 295, 456-459). This rule works for the verb in group 1 since these verbs are obstruent final according to her criterion. Yet it is not obvious how this rule acts on consonant final verbs such as *eeru* 'climb', *pannu* 'do', *col* 'say', *kaluvu* 'wash', *tallu* 'push'.

On the contrary, there is positive evidence to claim that *-u* is the participle marker. First, when verbal participles are compared to adjectival participles, the regularity of the paradigm shows that the *-u* of verbal participles is an independent suffix. e.g.

113.		verb	past	suffix	
	VBL. PART	va	nt	u	> vant <u>u</u>
	ADJ. PART	va	nt	a	> vanta

Nevertheless, the participle suffix *-u* is not homogeneous, because some participle forms have *-u*, but others have *-i*. According to this difference, the participle forms in example 106 can be classified into three groups. The first two groups have *-u* or *-i* respectively after the past tense markers, and the third has *-i* following the verb. e.g.

114.		verb-tense-suffix
	Group 1	naTa-nt-u
		ta-nt-u
		va-nt-u
		koTu-tt-u
	Group 2	paTi-cc-i
		aTi-cc-i
		vay-cc-i
	Group 3	veTT(u)--i
		coll--i

These examples show that *-u* follows verbs with final non-front vowels whereas *-i* appears in two contexts: a) following the tense suffix of a verb ending with front vowel or fronted diphthong, and b) following a verb which does not have overt tense markers. As far as distribution is concerned, *-u* and *-i* of group 1 and 2 is unproblematic since these verbs belong to class i (strong verbs in traditional terms). Yet *-i* in group 3 raises several questions. The participle marker seems to attach to tense suffixes in group 1 and 2, but it follows a verb stem in group 3. To solve this disparity, the researchers, who assume the past tense marker as the participle suffix, propose that *-i* in *colli* and *veTTi* type forms is the reduced form of the past tense marker *-in*. e.g.

115.	past tense form	participle
	veTT-in-een	veTT-i
	peec-in-een	peec-i
	elut-in-een	elut-i

This observation is problematic for a participle like *colli* which has the past tense form *conneen*.²⁷

This difficulty can be overcome by invoking the assumption made in the discussion on tense formation in 4.3.1. It was suggested there that the past tense marker *-in* has some sort of 'else where' condition.²⁸ This means that *-in* is applied to verbs which are not specified for any other past tense marker. The same rule can be proposed to characterize the behaviour of *-i* in group 3; *-u* (and *i* in group 2) occurs with all verbs which have been specified for tense markers. *-i* in group 3 is attached to all verbs which are not specified for a particular tense suffix. This observation appears to be correct, because *-u* attaches to tense markers, and *-i* appears after verbs with no tense suffixes. In other words, *-u* and *-i* have complementary distribution. *-u* is sensitive to tense suffixes, but *-i* is not.

This distinction between *-u* and *-i* immediately raises the question whether the suffix that precedes *-u* and *-i* is actually a tense suffix or not. Lehmann (1989:72) points out that 'the verbal participle suffix is homophonous with the various past tense allomorphs'. This observation may be correct, if it means that the participle and the past tense suffixes are similar in form, but they have different functions.

However, considering the homophonous forms of the past tense suffixes to be the participle markers seems to undermine the proposal that *-u* (or *-i*) denotes the verbal participle. This difficulty can be avoided hypothesizing two allomorphs [PAST TENSE + u] and [0 + i] for verbal participles. The reasons for the occurrence of past tense suffixes with a participle marker are not explicit. It may relate to phonology, semantics or pragmatics. Supposedly, the homophonous form may imply that the action or event expressed by the participle clause takes place before the action or event specified in the main clause. For example, if the main event takes place at one point in the future, this act or event is preceded by the act or event indicated by the participle clause. Further, the occurrence of past tense suffixes with the verbs in group 1 and 2 may be another instance

27. Arden (1942:158) observes that *conneen* is the contracted form of *collineen*.

28. See Asher (1966:23-24).

of filling the extra skeletal structure that Christdas assumed for the verbs in class 1 (e.g. Strong verbs).

This assumption, that is, the participle suffix as *-i* or *-u* with the homophonous past tense, can be supported by two observations. First, there are several instances in Tamil where different categories have the same form. For instance, the third person singular neuter future agreement suffix, future adjectival morpheme, and the conjunction form have the same phonemic form, e.g. *-um*. The infinitival suffix and the adjectival suffix are also the same in form, e.g. *-a*. Thus, assuming the past tense and participle forms are similar in form does not result in peculiarity. Second, and more interestingly, the time reference of participle phrases depends on the matrix sentence. An indication of this is that participle forms, do not have a separate tense node in syntax. Therefore, assuming a homophonous tense suffix with *-u* or *-i* as the participle suffixes does not give undesirable results. Thus, [past tense forms + *u*] or [*-i*] are considered to be the participle markers.

These suffixes are bound morphemes and always appear immediately after a verb stem. Thus, they are assumed to be functional heads invoking the properties of functional heads, discussed in 3.2.

5.5. Summary

This chapter has illustrated morphosyntactic properties of finite and negative forms. The finite suffixes occur after modal verbs, negative verbs and the negative suffix. All these forms have provided examples for the assumption that morphs are syncretized forms of several morphemes. The finite forms, except *-u*, *-aam* and *-laam*, contain tense, finite and agreement morphemes. *-laam* consists of verbal properties in addition to the morphemes common to other finite suffixes. *-aam* carries negative morpheme together with tense, finite and agreement morphemes. The negative suffix is observed to be the combination of negative and tense morphemes. More importantly, it has been noted that the negative verb *il* has a counter part auxiliary verb. This auxiliary and *maaTT*, the other negative verb, show the properties of functional heads. Thus, they are identified as functional (verb) heads. Having analysed morphemes related to the finite clauses, morphosyntactic properties of two non-finite forms, namely the infinitival suffix and participle suffixes, were introduced.

Morphology of suffixes in verbal forms has, so far, been illustrated. Yet nothing has been mentioned of the verb. Thus, in the next chapter, I discuss issues related to the verb applying the functional category approach developed so far in this dissertation.

Chapter 6

The Verb and the functional category approach

6.0. Introduction

Verbal forms in Tamil, as indicated in 4.1, are of two types; some of them are finite, others are non-finite. The finite forms consist of either a verb stem, tense and agreement suffixes or a verb stem and finite suffixes.¹ The non-finite verbal constructions such as verbal participles and infinitives contain verb stems followed respectively by participle and infinitival suffixes. Additionally, adjectival participles have a tense suffix between the verb stem and the adjectival suffix. Morphosyntactic properties of these suffixes have been so far characterized applying the functional category approach to morphology outlined in chapter 3. The peculiarities of verb have not yet been examined. Hence, this chapter explores some characteristics of verbs within the theoretical framework so far discussed.

In 5.2, I assumed that two suffixes, e.g. *-aam* and *-laam*, have properties of verbs. They are the syncretized forms of several morphemes and appear in the context of a verb in parallel to the other modal verbs. As a result, these two suffixes were characterized to be verbs with functional properties. Further, the discussion of negative verbs hypothesized, without much details, that *il* 'not to be' and *maaTT* 'will not' are auxiliaries. Also, these auxiliary verbs have been observed to have properties of functional heads. The

¹. The notions, root and stem, have been used in the literature vaguely and interchangeably. Arden (1891/1942:135), for example, considers root and stems to be identical. Lehmann (1989:49) treats stem to be the imperative singular form or the dictionary form. He defines root as "the irreducible lexical morpheme of a verb". Yet it is not clear how he can distinguish difference between the dictionary form and the irreducible morpheme. For the present purpose, I consider stem to be the lexical (= dictionary) form of a verb. I do not assume the existence of derived verb. Thus, there is not a necessity to distinguish roots (possibly dictionary forms) from derived forms.

implication of these analyses is that verbs in Tamil can be classified into different groups.
e.g.

1. Main verb vs auxiliary verbs,
Lexical verbs vs functional verbs.

To begin with, section 6.1 describes main verbs or lexical verbs. Auxiliaries are distinguished from main verbs in section 6.2, and it will be argued that the modal verbs and a set of verbs which have been assumed to be auxiliaries are not auxiliaries. In Section 6.3, I examine the properties of these verbs, and propose that these verbs are functional verbs. Finally, section 6.3.4 and 6.3.5 discuss some peculiarities and the categorial nature of the functional verbs.

6.1. Lexical (main) verbs

Lexical verbs can be negatively defined as those which are not auxiliaries or functional verbs. One significant property of lexical verbs, as opposed to auxiliary or functional verbs, is that they can appear independently and express a complete act, event, opinion and so on, (without an assistance of another verbal form). This is exemplified in 2-4 where 2 has a lexical verb, and 3 and 4 have auxiliary or functional verbs. e.g

2. poo-nka.
go-IMP
(you may) go.
3. poo-k-a maaTT-een.
go-k-INFN will not-1/SG
I will not go.
4. paTi-cci koTu-tt-een.
study-PART give-PAST-1/SG
I taught (some body, some thing).

Lexical verbs are many in number and can be classified into different groups. One possible prominent distinction occurs between single verbs and paired verbs. The simple

verbs have one form. e.g.

5. poo - go
6. paTi - study
7. ciri - smile/laugh
8. vaa - come

Paired verbs are those which have two forms that denote whether the action expressed by the verb affects the subject or it makes an effect on the patient.² In 9, movements affect the leaf, but in 10, the subject makes an effect on the patient, in this case, the leg.

9. kaatt-ukku kola aaT-utu.
 wind-DAT leaf move-3/SG/NEUTER/PRES
 The leaf moves to the wind.
10. naan kaal-a aaTT-ir-een
 I leg-ACC move-PRES-1/SG
 I shake/move my leg.

These verbs, like other lexical elements, are represented in the C-lexicon. Lexical entries are different from the functional ones because the former are not represented as tree like structures. Instead, they surface in encyclopaedic forms. Thus, the simple verbs have one form together with their encyclopaedic information whereas paired verbs have two forms together with their information structure under a single entry.³ For example, the lexical tree for *poo* in 11 gives its phonological form, categorial and semantic (thematic) information in a single entry. In 12, both *aaTu* and *aaTTu* are represented as one lexical

2. The notions affectivity and effectivity are due to Paramasivam (1984). See Paramasivam (1984) and Kandiah (1967, 1968) for some discussion on these verbs. The former differentiates these verbs based on the criteria affective and effective. The latter assumes that the difference between the two forms in a pair is whether the act or event takes place volitively or involitively. Both these analyses are based on semantics of the verbs in question.

3. See 8.2.1 for more details.

13.		Affirmative		Negative
	obligation	veen(T)um	must	veen(T)aam
				veenTaam
	ability	muTiyum	can	muTiyaatu
	possibility	-laam	may/let's	--
	permission	-laam	is permitted	--
	permission	-TT	may/can	--
	ability (passive)	eelum	can	eelaatu
	probability	kuuTum	can	kuuTaatu

veenum/veenTaam indicate necessity and obligation, and have counterpart negative forms *veenaam /veenTaam*. They may follow either noun phrases or infinitival phrases.

14. en-akku cooru veen-um.
I/OBL-DAT rice want-FN
I want rice.
15. pullay-kku onnum koTu-kk-a veen-aam.
child-DAT anything give-kk-INFN must-NEG/FN
Don't give anything to the child.
16. naan ippa poo-k-a veen-um.⁵
I now go-k-INFN must-FN
I must go now.
17. nii inimeel inkee var-a veen-aam.
you any more here come/OBL-INFN must-NEG/FN
You should not come here any more.

muTi indicates ability or circumstantial possibility when it is used as a modal verb.

5. *pooka veenum* has a reduced form *pookanum*.

18. en-n-ooTa on-akku var-a muTi-y-um.
 I/OBL-n-SOCI you/OBL-DAT come/OBL-INFN possible-y-FN.
 You can come with me.

Probability is expressed by *kuuTum*.

19. avar var-a kuuT-um.
 he come/OBL-INFN probable-FN
 Probably, he will come.

The negative form of *kuuTum* indicates negative obligation.

20. naan var-a kuuT-aat-u.
 I come/OBL-INFN probable-NEG/TENSE-FN
 Definitely, I mustn't come.

eelum implies ability, and is used for conveying suggestions, or inquiring about others' opinion.

21. on-akku en-n-ooTa var-a eel-um-aa?
 you/OBL-DAT I/OBL-n-SOCI come/OBL-INFN able-FN-Q
 Are you able to come with me?
 (Is it possible for you to come with me?)

When *eelum* is accompanied by a dative or nominative subject it expresses respectively permission and ability.

22. taay/taay-kku poo-k-a eel-um.
 mother/mother-DAT go-k-INFN possible-FN
 The mother can go.
 (the mother is allowed/permitted to go, or The mother has the ability to go.)

-laam has two meanings: permission and possibility.

23. naanka ippa poo-k-a-laam.
 we now go-k-INFN-possible/FN
 We can go now. (Let's go.).
24. avar var-a-laam.
 he come/OBL-INFN-possible (permit)/FN
 He can come here (in the sense that he is allowed/permitted to come here.)
 He may come (in the sense that possibly he will come).

Permission or wish (optative) can be expressed by -TT.

25. mala pey-y-a-TT-um.
 rain rain-y-INFN-PERMIS-FN
 May it rain! (or it may rain (first), then we can do these work).
26. avar var-a-TT-um.
 he come/OBL-INFN-PERMIS-FN
 He may come.

The modal verbs outlined thus far, like negative verbs, are defective. Thus, they do not receive agreement suffixes. One exception is that the third person, singular, neuter form -*atu* appears after the tense suffix when some modal verbs take a past tense suffix. Though the tense suffixes do not overtly appear, all verbal forms with modals express time reference.⁶ These observations indicate that modal verbs do not have full paradigm compared to other verbs. These peculiarities are exemplified in 27, in comparison to the defective verb *teri* 'know'. The past and present adjectival participles in 27a-b consist of a verb stem, tense suffix and the adjective suffix. The negative form of an adjectival participle in 27c contains a verb stem, the negative suffix -*aat* and the adjective suffix -*a*. The verbal participle in 27d has the participle suffix attached to a verb stem. The gerundive noun in 27e has a verb stem, tense suffix and the nominalizer -*atu*. The negative gerundive form in 27f differs from that in 27e by having the negative suffix in place of the tense suffix. The infinitival form in 27g is the combination of a verb stem and the infinitival suffix -*a*.

6. See Asher (1982:181).

27	a.	veenT-iy-a	kuuT-iy-a	muTi-nc-a	teri-nc-a
	b.	veenT-ir-a	--	--	teri-y-ir-a
	c.	veenT-aat-a	kuuT-aat-a	muTi-y-aat-a	teri-y-aat-a
	d.	veenT-i	--	--	teri-nc-i
	e.	veenT-iy-atu	kuuT-iy-atu	muTi-nc-atu	teri-nc-atu
	f.	veenT-aat-atu	kuuT-aat-atu	muTi-y-aat-atu	teri-y-aat-atu
	g.	--	kuuT-a	muTi-y-a	teri-y-a

These forms are found in the following examples.

28. naan kaliyaanam kaTT-a veenT-iy-atu.
I marriage tie-INFN necessary-PAST-3/SG/NEUTER
I want to marry.
(It is necessary for me to marry).
29. ayyar-ukku koTu-kk-a veenT-iy-a ellaam koTu-tt-een.
priest-DAT give-kk-INFN necessary-PAST-ADJ all give-PAST-1/SG
I gave all what I had to give to the priest.
30. kaliyaanam kaTT-a kuuT-iy-atu.
marriage tie-INFN must-PAST-3/SG/NEUTER
X needs to marry.
31. cey-y-a kuuT-iy-a veelay ce(y)-nc-een.
do-y-INFN possible-PAST-ADJ work do-PAST-1/SG
I did what I had (was supposed) to do.
32. en-akku cey-y-a muTi-nc-a
I/OBL-DAT do-y-INFN can-PAST-ADJ
veelay on-kal-ukku-um cey-y-a muTi-y-um.
work you/OBL-PL-DAT-INCL do-y-INFN can-y-FN
You also can do the work which I can do.
33. anta veelay-a cey-y-a muTi-y-a-(i)l(l)-a(y).
that work-ACC do-y-INFN can-y-INFN-not to be-FN
X was unable to do that work.

34. nammal-ukku teri-nc-a aaluka iru-kk-ir-aanka.
we/OBL-DAT know-PAST-ADJ people be-kk-PRES-3/PL
There are people whom we know.
35. atu en-akku teri-y-a var-um.
that I/OBL-DAT know-y-INFN come/OBL-3/SG/NEUTER/FUTURE
I will come to know it.
36. teri-nc-a-t-a onnu coll-unka.
know-PAST-ADJ-PNOML-ACC one tell-IMP
Tell me something that (you) know.

This descriptive account implies that these verbs have been characterized as modal verbs depending on their meaning. I will go on to apply the criteria of the morphological and syntactic irregularities and the semantic underspecification to examine the auxiliary status of the modal verbs and negative verbs next.

6.2.2. Main verbs vs auxiliary verbs

In Tamil, Main verbs, including defective verbs, attach to tense and agreement suffixes. They also precede negative verbs and the negative suffix *-aat*. Robert (1985) observes that these agreement and negative suffixes accompany main verbs in English, but not auxiliary verbs. Pelletier (1994) argues that auxiliaries do not have either agreement or non-finite suffixes. She exploits these characteristics to differentiate the modal auxiliary verbs from the modal main verbs in Telugu.⁷ In this section, I will explore the behaviour of the modal and negative verbs in Tamil in relation to the morphological and syntactic irregularities and semantic underspecification.

6.2.2.1. Morphological irregularities

Morphological irregularities are found in tense, negative, agreement and non-finite morphs. First, verb forms in Tamil can be negated either by attaching the negative suffix *-aat* to the verb stems or by adding the negative verbs *il* 'be not' or *maaTT* 'will not' to an

7. Telugu is another Dravidian language spoken in the South Indian State of Andhra Pradesh. See Pelletier (1994:3-7) for some details of sociolinguistic background and preliminaries of Telugu.

infinitival phrase. When modal verbs are negated by adding the negative suffix or negative verbs, they show different behaviour.

37.	V-FN	V-aat-FN	V-il
a.	-laam	--	--
b.	kuuT-um	kuuT-aat-u	* kuuT-a-(i)l-(l)-a(y)
c.	muTi-y-um	muTi-y-aat-u	muTi-y-a-(i)l-(l)-a(y)
d.	poo-k-um	poo-k-aat-u	poo-k-a-(i)l-(l)-a(y)

muTi 'can' can precede both the negative suffix and negative verb, but *kuuTu* 'probable' cannot occur before the negative verb *il*. *-laam* 'possible' does not precede either *-aat* or *il*. This shows that *muTi*, but not *kuuTu*, resembles the main verbs represented in 37d by *poo* 'go'. Thus, *muTi* can be considered to be a main verb, rather than an auxiliary verb. The status of *kuuTu* is not clear in this respect. *-laam* differs from the main verbs as well as other modal verbs because it does not receive the negative suffix or negative verbs. The negative verbs also have different behaviour in relation to negation. *il* may attach to the negative suffix, but not *maaTT*, as seen in 5.3.2-5.3.4.

38. kaacu il-aat-a (pullay)
money not to be-NEG/TENSE-ADJ (girl)
The girl who does/did not have money
39. * poo-k-a il-l-aat-a (pullay)
go-k-INFN not to be-l-NEG/TENSE-ADJ (girl)
The girl who does/did not go
40. * poo-k-a maaTT-aat-a (pullay)
go-k-INFN will not-NEG/TENSE-ADJ (girl)
The girl who will not go
41. * il-il-l-ay.
not to be-not to be-l-FN
42. * maaTT-il-l-ay.
will not-not to be-l-FN

This test shows *-laam*, *maaTT* and one form of *il* which follows infinitival phrases, function as auxiliaries in relation to negation.

Modal and negative verbs, except *maaTT*, do not take the agreement suffixes.⁸ It has been illustrated in 5.1 that the modal verbs end with finite suffix *-um* in the affirmative, and that *il* precedes *-ay*. Only *maaTT* receive agreement suffixes.⁹ If the lack of the [+AGR] feature is taken to be a morphological irregularity that determines auxiliaries, all modal verbs and the negative verb *il* are auxiliaries.

These verbs behave differently in relation to the assumption that auxiliary verbs do not have non-finite forms. 27, repeated here as 43, shows *veenTu*, *kuuTu*, and *muTi* have non-finite forms, in parallel to those of the main verbs.

43.	a.	veenT-iy-a	kuuT-iy-a	muTi-nc-a	teri-nc-a
	b.	veenT-ir-a	--	--	teri-y-ir-a
	c.	veenT-aat-a	kuuT-aat-a	muTi-y-aat-a	teri-y-aat-a
	d.	veenT-i	--	--	teri-nc-i
	e.	veenT-iy-atu	kuuT-iy-atu	muTi-nc-atu	teri-nc-atu
	f.	veenT-aat-atu	kuuT-aat-atu	muTi-y-aat-atu	teri-y-aat-atu
	g.	--	kuuT-a	muTi-y-a	teri-y-a

Further, some of these verbs have emphatic constructions which are similar to that of main verbs. It was noted in section 5.3.2. that when structures with the auxiliary *il* is emphasized the emphatic marker is attached to a duplicated infinitival form of the main verb. Similarly, in example 46-49, the emphatic marker has accompanied a geminated (infinitival) form of the modal verbs. e.g

44. poo-k-a-v-ee poo-k-a-l-a.
 go-k-INFN-v-EMP go-k-INFN-not to be-FN
 X absolutely did/does not go.

8. Pelletier (1994:29ff) accounts for this property to distinguish auxiliary negative verbs *leedu* and *kaadu* from the homophonous lexical negative forms.

9. The reason for this peculiarity may be the fact that *maaTT* still retains some of its lexical properties though it has been changing from lexical category to grammatical one. See Burling (1992:303-307) for a discussion on grammaticalization of lexical forms.

45. *poo-k-a-v-ee* *poo-k-aat-u*.
 go-k-INFN-v-EMP go-k-NEG/TENSE-FN
 It absolutely did/does not go.
46. *muTi-y-a-v-ee* *muTi-y-aat-u*.
 can-y-INFN-v-EMP can-y-NEG/TENSE-FN
 Absolutely cannot ((do) X).
47. *eel-a-v-ee* *eel-aat-u*.
 possible-INFN-v-EMP possible-NEG/TENSE-FN
 Absolutely not possible.
48. *kuuT-a-v-ee* *kuuT-aat-u*.
 probable-INFN-v-EMP probable-NEG/TENSE-FN
 Absolutely cannot.
49. *kaacu il-l-a-v-ee* *il-l-ay*.
 money not to be-l-INFN-v-EMP not to be-l-FN
 Absolutely, X did not have money.
50. * *poo-k-a il-l-a-v-ee* *il-l-ay*.
 go-k-INFN not to be-l-INFN-v-EMP not to be-l-FN
 X absolutely did not go.
51. * *poo-k-a maaTT-a-v-ee* *maaTT-aar*.
 go-k-INFN will not-INFN-v-EMP will not-3/SG/HP
 X absolutely will not go.

These examples show that *muTi*, *eelu*, *kuuTu* and one type of *il* have infinitival forms that attach to the emphatic marker. Thus, with regard to the availability of non-finite forms, all modal verbs and negative verbs, except *maaTT* and *il* that follow an infinitival phrase, are similar to main verbs.

Further, Palmer (1979) and Pelletier (1994) observe that main verbs attach to tense suffixes, but auxiliary verbs do not. This observation is true for the modal and negative verbs in Tamil which behave differently in this regard. As is evident from 43, the modal verbs, except *-laam* (and *-TT*) attach to tense suffixes, but negative verbs do not receive

tense suffixes. This indicates that *-laam*, *-TT*, and the negative verbs have auxiliary properties.

These observations which relate to the behaviour of the modal and negative verbs are summarized in 52.

52.	Negation		Agr.	Non-finite	Tense
	aat	il			
Main Verbs	+	+	+	+	+
Modal Verbs					
muTi	+	+	+	+	+
veenTu	+	-	+	+	+
kuuTu	+	(?)	-	+	+
laam	-	-	-	-	-
Neg. Verbs					
maaTT	-	-	+	-	-
NP il	+	-	-	+	-
INFN il	-	-	-	-	-

This evidence shows that the modal verbs, except *-laam*, have properties of main verbs. Therefore, they cannot be treated as auxiliaries, as assumed by the traditional grammarians. Only two verbs in 52, e.g. *-laam* and *il* followed by an infinitival phrase, illustrate all properties of auxiliaries. *-TT* is the permissive suffix with a syncretized verb. *maaTT* seems to have retained its lexical properties, though it acts as a functional head. It can precede agreement suffixes, and optionally it can be separated from the preceding infinitival form by inserting the emphatic marker and inclusive marker. Interestingly, this negative verb does not have an agreement suffix in the third person neuter form.¹⁰ This indicates that, at least in some cases, it does not receive an agreement suffix. As a result, it is also characterized as an auxiliary verb resulting in only four auxiliary verbs for Tamil, namely, *-laam*, *-TT*, *il* and *maaTT*.

10. The third person neuter agreement suffix *-utu* cannot attach to *maaTT* as both forms have a syncretized tense morpheme. If they combine together, it gives two occurrences of tense morpheme violating the EP.

6.2.2.2. Syntactic Irregularities

One of the syntactic differences between the modal and negative verbs on the one hand, and the main verbs on the other, is that the former two categories always follow infinitival phrases. This particular behaviour of these verbs can be accounted for by classifying them as a separate group. Nevertheless, there is evidence that not only the modal and negative verbs, but also some defective verbs, given in 5.4.1, take infinitival complements.¹¹ Thus, characterizing the modal and negative verbs based on the complement selection is not accurate. Further, one may observe that the modal verbs have different case properties. For example, subject of *muTi* receives a dative case. *eelum* can have subject nouns with both nominative and dative cases. These inherent case properties also seem not to be adequate as there are verbs, which have been described as defective, have dative marked subjects. e.g.

53. en-akku kaacu keTay-kk-um.
 I/OBL-DAT money receive-kk-3/SG/NEUTER/FUTURE
 I will receive money.
54. appaa-v-ukku tampi-y-a piTi-kk-utu.
 father-v-DAT brother-y-ACC like-kk-3/SG/NEUTER/PRES
 The father likes my brother.

These observations show that case properties and complement selection do not provide a strong enough support to determine the modal verbs as auxiliaries.

6.2.2.3. Semantic properties

Auxiliaries have been assumed to have underspecified semantic properties. That is, they do not assign theta roles to the sentence. This observation is true for the negative verb *il* which follows an infinitival phrase, the negative verb *maaTT* and the modal verbs *-laam* and *veen(T)um*. That is because these verbs, when compared to the main verbs, seem do not have projected any semantic properties to the clause. For example, the negative verb *il* has a theme and possessor in 55, but it has only a infinitival phrase and nominative case marked NP when it follows an infinitival phrase, as in 56. In the latter case, if the NP is

¹¹. See Lehmann (1989:257-265) for more details.

the agent of the infinitival phrase, *il* has not additionally projected any semantic properties to syntax.

55. en-akku kaacu il-l-ay.
 I/OBL-DAT money not to be-l-FN
 I don't have money.
56. naan kaTay-ukku poo-k-a il-l-ay.
 I shop-DAT go-k-INFN not to be-l-FN
 I didn't go to the shop.

Further, *maaTT* never appears on its own. Thus, the NP in a clause with *maaTT* is interpreted as the agent of the infinitival clause. This is also true for *-laam* which is a bound form. Other modal verbs differ from these because they have their own thematic properties. *muTi*, for example, has a theme and an experiencer. *eelum* also has a theme and a experiencer. As far as semantic properties are concerned these verbs are similar to some unaccusative verbs and defective verbs. In 57, the unaccusative verb has a theme, and in 58, the defective verb has a theme and a goal (receiver).

57. kaatt-ukku kola aaT-utu.
 wind-DAT leaf move-3/SG/NEUTER/PRES
 The leaf moves to wind.
58. en-akku kaacu keTay-kk-um.
 I/OBL-DAT money receive-kk-3/SG/NEUTER/FUTURE
 I will receive money.

This behaviour of modal verbs shows that they cannot be straightforwardly characterized as auxiliaries. As a result, they are classified as defective verbs. Only *-TT*, *-laam*, *il* that follows infinitives and *maaTT* are assumed to be auxiliaries.

In the next section these criteria are applied to the verbs which have been introduced under aspectual auxiliaries.

6.3. Aspectual auxiliaries

Defining auxiliaries according to the morphological and syntactic behaviour of verbs questions the 'aspectual auxiliaries' discussed by researchers on Tamil.¹² These verbs, for example, *iru* 'to be', (*v*)*iTu* 'leave', *koTu* 'give', follow participle forms of verbs and express a variety of meanings such as perfect, perfective, beneficiary. e.g.

59. naan poo-i-(i)ru-nt-een.
 I go-PART-be-PAST-1/SG
 I had gone to America.
60. naan amerikaa-v-ukku
 I America-v-DAT
 poo-i(i)ru-kk-ir-een.
 go-PART-be-kk-PRES-1/SG
 I have gone to America.
61. naan poo-i-(i)ru-pp-een.
 I go-PART-be-FUTURE-1/SG
 I will have gone.
62. naan ankee poo-i-T-T-een
 I there go-PART-leave-PAST-1/SG
 I have gone there.
63. naan kaTataaci-y-a elut-i-T-T-een.
 I letter-y-ACC write-PART-leave-PAST-1/SG
 I have written the letter.
 (I have completed writing the letter)
64. naan poo-i-T-a-n-um.
 I go-PART-leave-INFN-must-FN
 I must have gone.

12. See Lehmann (1989:207-211, 222-228), Annamalai (1982), Asher (1982:159-165) for the traditional view.

65. avunka viiTT-ukku poo-i-iru-v-aanka.
 they house/OBL-DAT go-PART-be-FUTURE-3/PL
 They definitely will go home.
66. naan kaTataaci-y-a elut-i koTu-kk-a-(il)l-a(y).
 I letter-y-ACC write-PART give-kk-INFN-not to be-FN
 I did not write the letter for him (for his benefit).

These examples (and others in general) illustrate that so called 'aspectual auxiliaries' receive tense and agreement suffixes (59-63), non-finite forms (64, 66), and negative verbs (66).

67.	Negation		Agr	Non-finite	Tense
	aat	il			
pooi (i)ru	+	+	+	+	+
pooi ((v)i)Tu	+	+	+	+	+
poo	+	+	+	+	+
vaa	+	+	+	+	+

This is an indication that these verbs, as far as the four morphological properties are concerned, behave as main verbs, but not as auxiliary verbs.

Syntactically, they differ from both lexical main verbs as well as the modal verbs. That is, they always accompany a participle form of a verb and function as single words. So the verb form *pooiruppeen* cannot be interrupted in any way. This characteristic is peculiar to these verbs. Consequently, they, as opposed to the modal verbs, can be classified as auxiliaries based on the syntactic irregularities.

Moreover, these aspectual verbs behave differently as far as semantic under specification is concerned. Some aspectual verbs seem not to have thematic properties, but others indicate that they have some of them.

68. naan inta viiTT-ukku va-ntu-(i)ru-nt-een.
 I this house/OBL-DAT come-PART-be-PAST-1/SG
 I have come to this house.

69. naan raamaayanam paTi-cci-(i)ru-nt-een.
I Ramayana study-PART-be-PAST-1/SG
I have read Ramayana.
70. Tiicar raaman-ukku puttakam koTu-ttu-(i)ru-nt-aar.
teacher Raman-DAT book give-PART-be-PAST-3/SG/HP
The teacher has given the book to Raman.

iru in these sentences can be argued to have no arguments and theta roles since the number of the arguments realized within the sentences are equivalent to the number of arguments of the verbs in the verbal participles. e.g

71.	Arg (the main verb)				iru	Arg (within the sentence)
vaa	Th	= 1	+	0	1	
paTi	A, Th	= 2	+	0	2	
koTu	A, Th, Goal	= 3	+	0	3	

However, this observation cannot be generalized since there are counter examples.

72. raamaa en-akku vayal-a kott-i koTu-tt-aan.
Rama I/OBL-DAT field-ACC dig-PART give-PAST-3/SG/MAS
Rama tilled the field for me.

kottu 'dig', the main verb in the verbal participle form in 72 has only two arguments, but in the sentence there are three argument positions, namely agent, theme and goal. This indicates that the second verb, in this case *koTu* 'give', has contributed its arguments to the sentence as well.

These examples imply that aspectual verbs have arguments and theta roles, but they merge with those of the verb in the verbal participles.¹³ This is an indicator that aspectual verbs are irregular as far as semantic properties are concerned.

In summary, aspectual verbs have mixed properties in relation to three criteria, the morphological irregularities, syntactic irregularities and semantic underspecification. They are morphologically similar to lexical verbs, but syntactically and semantically they

¹³. See Robinson (1994) for a discussion of merging.

differ from lexical main verbs. Therefore, they can be classified as a separate group of verbs.

In the next section, I go on to describe these verbs and their properties, and characterize them as functional verbs invoking the morphosyntactic approach developed in the previous chapters.

6.3.1. Aspectual verbs as verbs of modality

The verbs that accompany verbal participles have a variety of semantic interpretations such as attitudes, opinions, beneficiary, change of situation and so on. Annamalai (1982:162) characterizes these different expressions broadly into six. e.g.

73. 1. The status of the event: completed or concluded,
e.g. *muTi* 'finish' *viTu* 'complete'
2. The relevance to the (speech) event:
iru 'be'
3. The consequence of the event: future relevance or change, e.g.
vai 'keep', *pooTu* 'put', *viTu* 'change'
4. The effect of the event on one self or another:
kol (kir) 'self-benefactive', *koTu* 'give' (do for X)
5. The speakers attitude towards the event:
tolai 'get lost'
6. The subject's intention: demonstration or assessment

He, then regroups these six into four. According to this classification the differences are related to status (1 & 2 above), consequence (3 & 4 above), attitude (5 above) and intention (6 above). These categories evince that verbs which are traditionally recognized as 'aspectual auxiliaries', have a wide range of meanings, not merely the aspectual interpretation. Therefore, I introduced them as verbs of modality (VM).¹⁴

In Tamil, VMs are of three types: aspectual, attitudinal and non-attitudinal.¹⁵ The next section is devoted to a more descriptive examination of these verbs.

¹⁴. The notion 'modality' is due to Palmer (1986) who employs this notion to express not only attitudes and opinions, but also a rather wide variety of meanings.

¹⁵. The notions 'attitudinal and non-attitudinal' are due to Lehmann (1989).

6.3.1.1. A descriptive account on aspectual verbs

iru 'to be' and (*v*)*iTu* 'let, leave' together with preceding verbal participle forms indicate perfect and perfective aspects.^{16,17} The former (i.e. perfect) expresses a result, an experience, an act of recent past or a situation continued from past to present.¹⁸

74. naan poo-i-(i)ru-nt-een.

I go-PART-VM/be-PAST-1/SG

I had gone.

75. naan amerikaa-v-ukku poo-i(i)ru-kk-ir-een.

I America-v-DAT go-PART-VM/be-kk-PRES-1/SG

I have gone to America.

76. naan poo-i-(i)ru-pp-een.

I go-PAST-VM/be-FUTURE-1/SG

I will have gone.

(*v*)*iTu* preceded by a verbal participle form indicates perfective aspect.¹⁹ Annamalai (1982:92-126) distinguishes two forms of *viTu* based on the meaning. They are *viTu* 'change of situation' and *viTu* 'completion'. The former is not aspectual and appears as *puTu* in ET. He (ibid. 92) has also noted that in some dialects the completive *viTu* appears as (*i*)*ru*. Interestingly, this *iru* form is found in ET as an optional variant of the completive *viTu*.²⁰

The perfective *iru* has a peculiar behaviour which distinguishes it from the stative *iru*. First, the past tense form of the perfective *iru* and that of (*v*)*iTu* are the same, e.g. -*TT*.

16. See Annamalai (1982:147-159) for detailed account of *iru*.

17. Aspect refers to a different situation of one targeted time point. Comrie (1976b:3) points out that "aspects are different ways of viewing the internal temporal constituency of a situation". Annamalai (1982) in his introduction to VMs (in his terms auxiliary verbs) uses "situation to include both event or action and state, ... from the point of view of the speaker" (p. 45).

18. See Asher (1982:158-159) and Lehmann (1989:206-207) for some details.

19. For details see Schiffman (1969:116-135).

20. The occurrence of both completive *iru* and *viTu* is another instance that shows ET is a mixture of different dialects of IT.

This shows the historical relationship between them. Second, the perfective *iru*, like *(v) iTu*, receives the future tense marker *-v* whereas the stative *iru* in the same context acquires *-pp*. Therefore, in the following examples both perfective *viTu* and *iru* are interpreted as *VM/leave*.

(v) iTu also implies anticipation, surprise and unexpectedly realized events. It occurs in several contexts as exemplified in 77-80. When *viTu* is in the past tense it implies completion of an action or event. With a future tense suffix, *(v) iTu* expresses the fact that an action or event will definitely take place in the future. Further, when the infinitival form of this verb is followed by the modal verb *veen(um)* it expresses an obligation or a supposition.

77. naan ankee poo-i-T-T-een.
I there go-PART-VM/leave-PAST-1/SG
I have gone there.
78. naan kaTataaci-y-a elut-i-T-T-een.
I letter-y-ACC write-PART-VM/leave-PAST-1/SG
I have written the letter.
(I have completed writing the letter)
79. naan poo-i-T-a-n-um.
I go-PART-VM/leave-INFN-must-FN
I must have gone.
80. avunka viTT-ukku poo-i-iru-v-aanka.²¹
they house/OBL-DAT go-PART-VM/leave-FUTURE-3/PL
They definitely will go home.

It is interesting to note, as Comrie (1976b) points out, that the perfective aspect emphasises the completeness of the act or event as a whole. Thus, a complete action

²¹. Yet some speakers who have some knowledge of literary Tamil use *iTu* form with future tense markers.

anka-y-ee caappiT-Tu kiTTu va-nt-iTu-v-oom.
there-y-EMP eat-PART SIMUL come-PAST-VM/leave-FUTURE-1/PL
We come back after having meal in that place.

expressed by the perfective aspect differs from a completed action.²² This distinction can be illustrated by comparing *muTi* 'finish' to *(v)iTu*. First, the lexical verb *muTi* 'finish' is not semantically equivalent to *viTu*. The former can imply the finishing of another act, as in 81. Yet *viTu* does not indicate finishing something, but the completeness of the act, the event or situation as a whole. Thus, 82 denotes the completeness of drinking, but not two acts, drinking and completing.

81. naan kooppi kuTi-cci muTi-cc-een.
 I coffee drink-PART finish-PAST-1/SG
 I finished drinking coffee.
82. naan kooppi kuTi-cci-T-T-een.
 I coffee drink-PART-VM/leave-PAST-1/SG
 I drank coffee (completed)

Second, *(v)iTu* can follow *muTi*, but not vice versa, as seen in 83-84.

83. naan caappiT-Tu muTi-cci-T-T-een.
 I eat-PART finish-PART-VM/leave-PAST-1/SG
 I finished drinking coffee.
84. * naan caappiT-Tu-T-Tu muTi-cc-een.
 I eat-PART-VM/leave-PART finish-PAST-1/SG

The example 84 is ungrammatical, because once an act is considered to be a complete whole it has come to the point of termination. So attaching *muTi* to *(v)iTu* results in redundancy and logical impossibility since a complete act (or an act that has terminated) cannot be finished. In the sentence 83, finishing is one aspect of completion. In other words, completion is a process. Hence, *(v)iTu* can be added to contribute to the sense of completeness. This shows that when an act is in a "complete state" nothing can be added due to the fact that it presents an uninterruptable whole. Nevertheless, if an act is in the "process of completion or finishing" it can relate to other activities.

Thirdly, *muTi* cannot be used with the stative verbs such as *teri* 'know' since the former is a process verb (85, 87). Yet *(v)iTu* occurs with the stative verbs to show that the

²². For a detailed discussion see Annamalai (1982:103-120).

event is complete (86). This reveals that *muTi* is a process verb whereas (*v*)*iTu* is a stative verb. e.g.

85. * avar paya-ntu muTi-cc-aar.
he fear-PART finish-PAST-3/SG/HP
86. avar paya-ntu-T-T-aar.
he fear-PART-VM/leave-PAST-3/SG/HP
He feared.
87. * Tampi anta ceetiy-a
brother that news-ACC
teri-nci muTi-cc-aar.
know-PART finish-PAST-3/SG/HP

The discussion so far indicates that *iru* and *viTu*, verbs which have been characterized as 'aspectual', are not confined to express merely aspectual differences, but also they imply modalities. This characteristic is confined only to these verbs. However, other modality verbs do not show aspectual differences, but solely attitudes and non-attitudes.

6.3.1.2. The attitudinal verbs

1. pooTu

pooTu 'put' implies the agent's lack of care towards an action or event, malicious intent and hastiness. It occurs only after transitive verbs.

88. or-ee aTi-y-aa aTi-cci-pooT-T-aaru.
one-EMP blow-y-ADV hit-PART VM/put-PAST-3/SG/HP
He hit (completed/ suddenly) in one shot.

In this occurrence *pooTu* implies the completeness of a volitive act or event.

2. puTu

puTu is the equivalent of what Annamalai identifies as the *viTu* 'change of situation'. it expresses one's dismay or that an act or event happened or has to be carried out against

one's will. Thus, example 89 indicates that 'I had to sell off the land unwillingly or unexpectedly and that now I regret it'.

89. eTatt-a vi-ttu-puT-T-een.
land/OBL-ACC sell-PART-VM/ put-PAST-1/SG
I sold off the land.

The sentence in 90 shows my regret about telling (such things) without thinking.

90. at-a coll-i-puT-T-een.
that-ACC say-PART-VM/put-PAST-1/SG
I said it without much thinking, but I shouldn't have done it. (regret!)

3. poo

poo 'go' reflects the speaker's negative attitude towards a change of state, because she or he may not have expected or desired such a change. This verb occurs with intransitive verbs that have semantic interpretation 'change'.

91. kannu-kal-a vaaT-i-poo-cci.
plant-PL-ACC whither-PART-VM/go-icci
The plants withered. (unexpectedness, regret!)

Unlike in many other VMs, in this environment the verbal participle form preceding *poo* can be duplicated to indicate abruptness or continuous action or event.

92. kannu-kal-a vaaT-i vaaT-i-poo-cci.
plant-PL-ACC whither-PART whither-PART-VM/go-cci
The plant withered continuously.
(quickly, unexpectedly).

Sentence 92 also implies the resentment of the speaker concerning the deterioration of the health of the plants.

4. tolai

The speaker's aversion or feeling of dislike towards the event is shown by *tolai* 'get lost'.

93. avan kaac-a ellaam
 he money-ACC all
 ali-cci-tolai-cci-T-T-aan.
 waste-PART-vm/lose-PART-VM/leave-PAST-1/SG/MAS
 He wasted all his money.

5. tallu

tallu 'push' expresses that the event or act is done quickly or at an accelerated speed. This auxiliary verb is used with both positive and negative sentences.

94. kantacaami vaat-a veTT-i-tall-in-aan.
 Kantasami branches-ACC cut-PART-VM/push-PAST-3/SG/MAS
 Kantasami cut branches very quickly.

95. raamacaami veraku veTT-i-tall-il-a(y).
 Ramasami fore wood cut-PART-VM/push-not to be-FN
 Ramasami didn't cut firewood that quick.

6. keTa

KeTa means 'remain in a state'. Thus, the situation described by the main verb continues to be in the same state. In example 96, the house has been destroyed (broken) and continuously remains in the same state.

96. viiTu oTa-nci-keTa-kk-u.
 house break-PART-VM/remain-kk-FN
 The house destroyed and remained in the same state.

7. kili

kili 'Tear' reflects a bad impression, a negative attitude of the speaker towards an event or act (unsuccessfully) performed by somebody.

97. veela ce-nci-kili-cc-atu poot-um. vaa-nka.
 work do-PART-VM/tear-PAST-GNOML enough-FN come-POLITE
 You have done enough harm. So, please, stop work.
 (You are not doing well, so, stop it. I don't need your work any more).

98. nii-y-aa inta veela ce-nci-kili-cc-a?
 you-y-Q this work do-PART-VM/tear-PAST-2/SG
 Was it you, who did this work?
 (I am not happy with the work, that you did.)

8. tiri

tiri 'wander' implies exhaustion as a result of which the subject has stopped the act or event. It can express both negative and positive attitudes as well.

99. avan ellaatt-ay-um tinn-u-tit-t-aan.
 he all/OBL-ACC-INCL eat-PART-VM/wander-PAST-3/SG/MAS
 He wasted anything and everything.
 (He destroyed everything. (The speaker implies his anger and/or
 resentment)).

100. cey-y-a veenT-iy-a kaTamay-a ellaam
 do-y-INFN need-PAST-ADJ duty-ACC all
 ce-nci-tit-tu-T-T-u aalu
 do-PAST-vm/wander-PART-VM/leave-PART man
 amaty-aa poo-i cee-ntu-T-T-aan.
 peace-ADV go-PART join-PART-VM/leave-PAST-3/SG/MAS
 The man died contentfully since he thought that he had done all
 necessary duties and responsibilities.
 (lit. Having completed all necessary duties and responsibilities the
 man died peacefully.)

6.3.1.3. Non-attitudinal verbs

1. paar

paar 'see' states the assessment of a presupposed aspect of an event or act. In example 101, 'he tortured (tried torturing) to see whether the victim would obey him, or the latter would tell him the truth'. In this usage the subject of *paar* should be volitional, i.e. agentive.

101. avaru vata pann-i-paat-t-aaru.
 he bullying do-PART-VM/see-PAST-3/SG/HP
 He bullied somebody (to see whether the latter acts as the former wants).

102. anta maruntu kuTi-cci paat-t-een.
 that medicine drink-PART-VM/see/assess-PAST-1/SG
 I tried/assessed/checked by drinking that medicine (whether it would work).

2. kaaTTu

kaaTTu 'show', 'demonstrate' evinces that the demonstration is carried out for others' benefit as a result of which one could assess the action or event.

e.g.

103. naan katav-a tora-ntu-kaaTT-in-een.
 I door-ACC open-PART-VM/show-PAST-1/SG
 I opened the door and demonstrated (that it can be open, or how to open it).

In this instance, the speaker has opened the door to show that it can be opened or how to open the door. In other words, the speaker has made someone else assess the ability to open the door.

3. kir²³

kir, unlike many other attitudinal and non-attitudinal verbs, does not have a counter part (lexical) main verb. Nevertheless, it can be inflected for tense like any other (auxiliary) verb and has two infinitival forms: *kira* and *-kka*.²⁴ This verb gives several meanings such as self (or others') benefaction, voluntary action (not accidental), action performed by its own according to regulations or advice, simultaneity. e.g.

23. This form has been reported in literature as *koo* (Schiffman, 1969:116, 1979:41), and *kol* (Lehmann, 1989:225, Annamalai, 1982:136).

24. The derivation of the *-kka* form is rather vague. Yet it is possible that this form could be a reduced form of *-kkira* which may have lost *-ir* in the rapid speech. Schiffman (1969:120) points out that *-ka* is the infinitival form of *koo* 'self benefactive'. The occurrence of two infinitives of *kir* (*koll/koo*) may be the result of a dialect mixture.

104. naan en-n-aya aTi-cci-kir-een.²⁵
 I I/OBL-n-ACC beat-PART-VM/SELF BENE-1/SG
 I beat myself.
105. inkee ravaykki
 here tonight
 camay-cci-k-kiru-v-aanka.
 cook-PART-k-VM/SELF BENE-FUTURE-3/PL
 They will cook here tonight (for them / voluntarily).
106. ciiyaa-v-a keeT-Tu
 old man-v-ACC ask-PART
 elut-i-kk-a-n-um.²⁶
 write-PART-VM/SELF BENE-INFN-must-FN
 Having inquired from the old man he/I must write him-self (myself) (for his/my benefit).

It is noteworthy that the verbal participle form of *kir* denotes simultaneity.

107. kuli-ttu kiTTu paaT-in-aan.
 bath-PART SIMUL sing-PAST-3/SG/MAS
 He sang while he was bathing.

4. koTu

koTu 'give' is exploited to mean that the act or event has taken place for the benefit of other(s). Thus, the subject of the sentence should be volitive and possibly human.

108. avaru paaTatt-a coll-i-koTu-tt-aar.
 he lesson/OBL-ACC say-PART-VM/give-PAST-3/SG/HP
 He taught (explained) the lesson.

²⁵. It is interesting to note here that strangely enough, this verb form does not have a present tense marker. The reason could be phonological rather than syntactic. It seems that pronouncing *aTiccikireen* may be difficult. Thus, the immediate question is how it gets (present) interpretation. I leave this question open.

²⁶. *elutikkanum* can be replaced by *elutikkiranum* without any semantic change.

109. avun-ka beek-a kaTT-i-koTu-tt-aanka.
 he-PL bag-ACC tie-PART-VM/give-PAST-3/PL
 They tied the bag for somebody('s use).

colli koTu in 108 indicates that knowledge has been offered to some body through speaking. Yet the sentence in 110 is logically impossible and hence, unacceptable since transferring something that has already been eaten is not realistic.²⁷ This suggests that the unacceptability of sentence 110 is not solely based on syntax, but on semantics and/or pragmatics.

110. * ammaa pullay-kku cooru caappiT-Tu-koTu-tt-icci.
 mother child-DAT rice eat-PART-VM/give-PAST-icci

5. taa

taa 'give' can also be used to convey the meaning expressed by *koTu*.

111. Tiicar paTi-cci-taa-r-aanka.
 teacher study-PART-VM/give-PRES-3/PL
 The teacher teaches.
112. naan oru paaTTu coll-i-taa-r-een.
 I one song say-PART-VM/give-PRES-1/SG
 I (will) teach (you) a song.

6. vai

vai 'keep' has the semantic interpretation of future purpose or utility. It denotes that something is done expecting later consequences. In example 113, the mother may have kept Vadai away to use in future, probably, with the purpose of giving it to a child who was absent in the scene or to eat at a later time.

113. ammaa vaTay eTu-ttu-va-cc-aa.
 mother Vadai take-PART-VM/keep-PAST-3/SG/FEM
 The mother kept Vadai for future use.

²⁷. See Annamalai (1982:79).

7. alu

alu indicates that someone has done something unwillingly.

114. anta kuTumpatt-ay-ee kumaar taan
that family/OBL-ACC-EMP Kumar FOCUS
kaTT-i-alu-t-aan.
bind-PART-VM/unwillingness-PAST-3/SG/MAS
Kumar took care of that family unwillingly.

The verbs so far discussed are similar in two ways. Semantically, they are modality expressions and have variety of meanings, as shown in the above description. Syntactically, all of them follow verbal participles. The discussion so far has shown the semantic differences of these verbs. Next, I turn to discuss the properties of VMs.

6.3.2. Properties of VMs

I have pointed out in 6.3 that VMs in Tamil are not auxiliaries contrary to the traditional view, and that they behave as main verbs in relation to the properties of auxiliaries. However, these verbs, as VMs, also differ from lexical main verbs in that they never appear without verbal participles. Further, syntactically and semantically this group of verbs is not similar to modal verbs, given in 6.2.1, either. The modal verbs follow infinitival phrases and denote ability, possibility, necessity and their negative meanings. Yet the VMs follow verbal participles and express a number of meanings. In addition to these, the VMs preceded by verbal participle forms (henceforth PVM) have several other properties which are outlined in the next section. This discussion shows that the characteristics of VMs are consistent with the properties of functional heads. Therefore, I claim that they are suffixal in nature, and that they are functional heads.

The first, and the most important, property of the VMs is that they cannot be separated from the verbal participles. This is because these verbs function as modality expressions only if they immediately follow verbal participles. When another element is inserted inbetween a VM and the preceding verbal participle, the VM in question is no longer interpreted as it is, but as a (lexical) main verb. In other words, if an element is inserted inbetween a VM and the preceding verbal participle, the former no longer functions as a VM. In example 115, *pooTu* acts as a VM whereas in 116 it functions as a lexical main verb. The only reason is that the second verb in 116 has been separated from the preceding verbal participle by inserting a noun in the locative case.

115. rajaa kooliy-a kon-nu-pooT-T-aan.
 Raja cock-ACC kill-PART-VM/put-PAST-3/SG/MAS
 Raja killed (completed) the cock.
116. raja kooliy-a kon-nu vaal-ila pooT-T-aan.
 Raja cock-ACC kill-PART basket-LOC put-PAST-3/SG/MAS
 Raja killed the cock and put/threw it into the basket.

This observation indicates that the VMs are bound forms. It has been observed many times in the present work that functional heads cannot be separated from their stem (complement) categories. When this property is taken into account the VMs are similar to functional heads.

Second, due to the fact that the VMs cannot be separated from the preceding participles, the verbal participle and the VM in question (PVM) act as single phonological units. They (PVMs) receive one primary stress and less obvious juncture inbetween the verbal participle and the VM. For example, the perfect marker *iru* and the participle in 74, repeated here as 117, are pronounced as one single phonological unit without juncture in between the participle and *iru*.

117. naan poo-i-(i)ru-nt-een.
 I go-PART-VM/be-PAST-1/SG
 I had gone.

Moreover, the PVMs with attitudinal and non-attitudinal verbs have one stress and a less obvious juncture in between the participles and the VMs. Thus, *paTicci koTutteen* in 118 have less explicit juncture compared to the one in 119 which occurs between two lexical verbs.

118. naan inta puttakatt-a paTi-cci-koTu-tt-een.
 I this book/OBL-ACC study-PART-VM/give-PAST-1/SG
 I read this for X.
119. naan anta puttakatt-a paTi-cc-i, koTu-tt-een.
 I that book/OBL-ACC study-PART give-PAST-1/SG
 Having read this book, I gave (it) to X.

Third, the PVMs host tense and non-finite suffixes as a single unit, parallel to any other main verb. The verbal participle forms in PVMs cannot receive tense or non-finite suffixes as they are not compatible with the complement requirements of the latter type of suffixes. Also, it has been observed that if PVMs are interrupted, the VMs in them lose their ability to express modality. Therefore, when there is a necessity, the VMs in PVMs receive suffixes for the whole structure.

120. ka-nT-a neeram peec-i-k-kir-a-laam.
 see-PAST-ADJ time speak-PART-k-VM/SELF BENE-INFN-possible/FN
 When you see X, you can definitely speak to him/her.

121. kann-a muuT-i-k-kir-a-n-um.
 eye-ACC close-PART-k-VM/SELF BENE-INFN-must-FN
 Please, close (your) eyes.

This property also shows that the VMs are bound morphs.

Fourth, changing the order of the constituents of a PVM, like any other derived form, is not allowed. As against the behaviour of the free forms, the verbal participle form preceding a VM cannot be scrambled. The agent of the sentence 122, for example, has been scrambled in 123 without any semantic change. Yet if the constituent parts of 124 are scrambled *iru* does not give perfect interpretation, but it may express two subsequent actions.

122. naan viiTT-ukku poo-i caappiT-Tu,
 I home/OBL-DAT go-PART eat-PART
 paTi-cci kiTTu iru-nt-een.
 study-PART SIMUL be-PAST-1/SG
 I went home, had my meal and (then) I was studying.
 (Having gone home, having eaten, I was studying.)
123. viiTT-ukku poo-i, caappiT-Tu, paTi-cci kiTTu
 home/OBL-DAT go-PART eat-PART study-PART SIMUL
 iru-nt-een naan.
 be-PAST-1/SG I
 I went home, had my meal and (then) I was studying.
 (Having gone home, having eaten, I was studying.)

124. naan poo-i-(i)ru-nt-een.
 I go-PART-VM/be-PAST-1/SG
 I had gone.

125. *poo-i naan iru-nt-een.
 go-PART I be-PAST-1/SG
 ? I had gone.
 Having gone, I stayed (there).

If the uninterruptability is taken to be a property of words, PVMs are words. This indicates that the constituent parts of PVMs are suffixes.

Fifth, another instance of uninterruptability of the PVMs is that they are modified as single units. Hence, the modifiers precede the main verb (in the participle form) as seen in 126. If a modifier is placed inbetween the VM and the verbal participle form, as in 127, the former does not function as a VM, but it acts as a main verb.

126. naan puttakatt-ay nall-aa paTi-cci-(i)ru-kk-ir-een.
 I book/OBL-ACC good-ADV study-PART-vm/be-kk-PRES-1/SG
 I have studied the book well.

127. naan puttakatt-a paTi-cci-T-Tu
 I book/OBL-ACC study-PART-VM/leave-PART
 oyv-aa iru-kk-ir-een.
 relax-ADV be-kk-PRES-1/SG
 Having studied the book, I relaxed.
 (I was glad).

Six, the negative suffix or negative verbs are realized after the VMs as PVMs cannot be interrupted. This implies that the PVMs are negated as a single units. The affirmative sentence in 128 is negated by attaching the negative verb *il* to the infinitival form of *koTu*, in 129.

128. naan kaTataaci-y-a elut-i-koTu-tt-een.
 I letter-y-ACC write-PART-VM/give-PAST-1/SG
 I wrote the letter for him (for his benefit)

129. naan kaTataaci-y-a elut-i-koTu-kk-a-(il)l-a(y)
 I letter-y-ACC write-PART-VM/give-kk-INFN-not to be-FN
 I wrote the letter for him (for his benefit).

This characteristic of the PVMs is quite distinct from the negated main verbs. In the latter case, either one or both verbs of a main verb sequence can be negated separately. In example 130, the first verb of the main verb sequence is negated, and in 131, only the second verb is negated. The sentence 132 have separately negated two main verbs.

130. naan laibiriy-ila puttakam eTu-kk-aama (viiTT-ukku)
 I library-LOC book take-kk-NEG/ADV home/OBL-DAT
 poo-r-eeen.
 go-PRES-1/SG
 Without borrowing the book from the library I went home.
131. naan libiriy-ila puttakam eTu-ttu (viiTT-ukku)
 I library-LOC book take-PART home/OBL-DAT
 poo-k-a-(il)l-a(y).
 go-k-INFN-not to be-FN
 I did/do not go home after borrowing (lit. taking) the book from the library.
132. naan libiriy-ila puttakam eTu-kk-aama viTT-ukku
 I library-LOC book take-kk-NEG/ADV home/OBL-DAT
 poo-k-a-(il)l-a(y).
 go-k-INFN-not to be-FN
 Without borrowing the book from the library I did/do not go home.

Compared to these main verb sequences, the PVMs have severe restrictions concerning negation. Negating only the VM or the verb in the participle of a PVM is not possible for several reasons. First, interrupting a PVM by inserting an element results in interpreting the VM as a main verb. Second, the negative suffixes always attach to an infinitival form of a verb, but not to a verbal participle form. Thus, the negative elements cannot be attached to the participle of a PVM. The sentence in 133 is unacceptable as it violates this general requirement.

133. * naan kaTataaci-y-a elut-aama-koTu-kk-ir-een.
 I letter-y-ACC write-NEG/ADV-VM/give-kk-PRES-1/SG
 I did/do not write the letter for him (for his sake/benefit)
 (lit. * I did not write the letter, but it (the letter) is for his sake.)
134. * naan kaTataaci-y-a elut-i-koTu-kk-a-(il)l-a(y).
 I letter-y-ACC write-PART-VM/give-kk-INFN-not to be-FN
 I wrote a letter, but not for his sake/benefit.
 (lit.? I wrote the letter (for him), but it (the letter) is not for
 his sake/benefit)

This evidence from negation also indicates that the PVMs are single units.

The PVMs, as single words, are similar to any other derived word. Thus, the constituents of the PVMs cannot be interrupted or change their positions. They also have one primary stress. The implication of these observations is that a VM is only one constituent of a PVM, and that they are suffixal in nature, though they, as shown in 67, have characteristics of main verbs.

This hypothesis receives a supportive evidence from Pelletier (1994). Interestingly, she reports that the modal main verbs in Telugu have a similar behaviour. According to her, the modal main verb *-kal* 'can' is affixal and must be cliticized.²⁸ The resulting [infinitive + *kal*] structure is a single phonological unit. Therefore, it cannot be interrupted by inserting the emphatic marker *-ee* as shown in 135-136.²⁹

135. raay-a galig-aa-nu.
 write-INFN can-PAST-1/SG
 I could write.
136. * neenu ray-an-ee-gala-nu.
 I write-INFN-EMP-can-1/SG
 I can write.

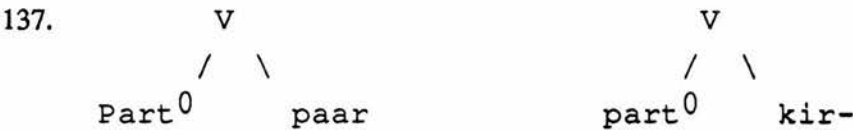
²⁸. Pelletier (1994) accounts the ability to receive tense and agreement morphemes as a basic determining criterion of main verbs. Applying this criterion she differentiates modal and negative auxiliary verbs from homophonous main verbs.

²⁹. These examples are from Pelletier (ibid. 93-94, examples 21-22).

These examples give cross linguistic evidence to show that main verbs may behave as suffixes, and that assuming the VMs as bound forms does not create a peculiarity.

6.3.3. VMs are functional heads

The observation that VMs function as suffixes and the properties of VMs, described in 6.3.2, indicate that the VMs are bound morphemes; they have a fixed position in a structure; they also require a stem category, in this case verbal participles, to host them. As a result, invoking the characteristics of functional heads, illustrated in 3.2 and elaborated many times in the previous chapters, the VMs are recognized as functional heads. Thus, they are represented in F-lexicon in functional trees.



It is explicit from this account that the VMs are functional verbs. Thus, as mentioned at the beginning of this chapter, I classify verbs in Tamil into three groups: lexical verbs, functional verbs, and auxiliary verbs.

The hypothesis that the VMs are functional verbs raises three questions. First, it is noted that *-kir* does not have a counterpart main verb, but all others have. This difference questions whether all functional verbs have equal functional status. Second, the examples given so far indicate that more than one VM can occur in a single sentence. When this is observed, it is necessary to explain whether there is any collocational restrictions regarding VMs. Third, it is shown that VMs express aspectual and modality differences. It is, therefore, natural to inquire whether these verbs are projected into a VP node or else to an aspectual or modality phrase. These three issues are discussed next before concluding this chapter.

6.3.4. Peculiarities of functional verbs

This section addresses the first two issues raised above.

6.3.4.1. VMs have varying degrees of functional status

The functional verbs, as it is obvious from the discussion in 6.3, have two different characteristics. They receive tense and agreement suffixes as other main verbs; simultaneously, they request stem categories to host them, and function as suffixes. It is noteworthy, however, that the functional verbs show varying degrees of functional status, as far as boundness and the properties of main verbs are concerned. In other words, all VMs are not equal as functional verbs. They have a different number of functional or lexical properties. *Kir*, for example, does not have a counterpart main verb and always functions as a bound morpheme requiring a verbal participle form to attach to. *tolai* is another verb which very rarely appears as a main verb. This shows that these verbs have more functional properties than others. On the contrary, *koTu*, *poo*, *vay* have more lexical characteristics. They, like lexical main verbs, can have geminated verbal participle forms to express quickness, hastiness of the performance.³⁰ e.g.

138. raamaa en-akku tooTTatt-a
 Rama I/OBL-DAT garden/OBL-ACC
 kott-i-kott-i-koTu-tt-aar.
 dig-PART-dig-PART-VM/give-PAST-3/SG/HP
 Rama dug the garden for me quickly.
139. kannu-kal-a vaaT-i vaaT-i-poo-cci.
 plant-PL-ACC wither-PART wither-PART-VM/go-cci
 The plant withered quickly/continuously.

Nevertheless, the VMs which have less lexical properties (i.e. those which seem to be grammaticalized ones) do not follow duplicated participle forms. Thus, assigning duplicated participle forms before *kir* results in unacceptability, as in 140.

³⁰. Duplication of the verbal participle form in this context seems to have semantic and/or pragmatic restriction also. The following sentences are unacceptable since dying and bearing are not viewed as processes.

- * pullay pira-ntu pira-ntu iru-nt-aa(l).
 girl bear-PART bear-PART be-PAST-3/SG/FEM
 ? The girl was being born (lit.)
- * kelavi cett-u cett-u po-i-T-T-aan.
 old man die-PART die-PART VM/go-PART-VM/leave-PAST-3/SG/MAS
 ? The old man (gradually/quickly) died.

140. * ciiyaa-v-a keeT-Tu
 old man-v-ACC ask-PART
 elut-i elut-i-kir-a-n-um.
 write-PART write-PART-VM/SELF BENE-INFN-must-FN

These examples make it clear that functional verbs have varying degree of functional status.

6.3.4.2. Collocational restrictions of the functional verbs

One of the hypotheses tested throughout the present work is that multiple occurrences of the same feature cannot appear in the same domain. Contrary to this assumption, the sentences in 141-145 contain more than one VM.

141. maruntu kuTu-ttu-paat-tu-T-T-een.
 medicine drink-PART-VM/see-PART-VM/leave-PAST-1/SG
 I tried (whether I shall be recovered) by taking medicine.
142. avaru at-a teri-nci kiTTu
 he that-ACC know-PART SIMUL
 iru-ntu-(i)ru-pp-aaru.
 be-PART-VM/be-FUTURE-3/SG/HP
 He would have known it.
143. avar ce-ttu
 he die-PART
 po-i-T-T-aar-aam.
 go-PART-VM/leave-PAST-3/SG/HP-hearsay.
 There is a hearsay that he has died.
144. kooliy-a kon-nu-puT-Tu-T-T-aanka.
 cock-ACC kill-PART-VM/put-PART-VM/leave-PAST-3/PL
 They (carelessly) killed (completed) the cock.

145. avaru maram veTT-i-pooT-Tu-(i)ru-nt-aaru.
 he tree cut-PART-VM/put-PART-VM/be-PAST-3/SG/HP
 He has cut (complete) the tree.

Verbal forms in these sentences have more than one VM in a sequence, except *kir*. VMs do not follow *kir* or derived forms from it exemplifying another instance of differences between *kir* and other VMs.

As mentioned previously, multiple appearances of VMs in sequences are problematic to the EP. In order to solve this problem the co-occurrence relations must be closely examined. It is observed that the VMs given in the second column of 146 can co-exist with those in the column three. The order of these VMs must be strictly observed, as it is given in 146.

146.					
			poo		iTu
			vai		aaccu
	main verb		tallu		iru
			pooTu		
			paar		

This ordering relationship indicates that the different VMs in Tamil have defined positions whereby aspectual VMs follow modality ones.

One of the reasons for this behaviour of VMs is possibly related to semantics. Bybee (1985) has noted that suffixes which affect the meaning of a verb (in other words, more relevant suffixes) occur closer to the verb than others. When this observation is invoked, it is obvious that the non-aspectual VMs appear closer to the main verbs than aspectual verbs since the former affect the semantic interpretation of the verb more than the latter.

This shows multiple occurrences of functional verbs are allowed, as far as they have distinct properties. In other words, in 141-145, verb forms are acceptable as there is no iteration of properties, i.e. aspect and attitudes. Accordingly, verbs can have one of the following three combinations.

147. 1. verb
 2. verb + [+/-Attitude]
 3. verb + [+/-Attitude] + Aspect

Modal verbs also may follow these verb structures.

148. naan poo-i-T-a-n-um.
I go-PART-VM/leave-INFN-must-FN
I must have gone. (or I must go).
149. ciyyaa-v-a keeT-Tu
Old man-v-ACC ask-PART
elut-i-kir-a-laam.
write-PART-VM/SELF BENE-INFN-possible/FN
I can write it with the help of elderly man.

In these sentences, the modal verbs follow the aspect verbs and nothing prevents two VMs appearing in a single clause, because they have different properties. This indicates that VMs belong to different categories and can appear in a sequence in the order given in 150.

150. VERB-ATTITUDE-ASPECT-MODAL

To summarize, this discussion has illustrated that VMs have varying degree of functional status. *kir* behaves as any other bound morpheme, but other VMs still have some properties of lexical verbs. Therefore, they can occur more than once in the same structure. Nevertheless, this behaviour does not violate the EP as far as multiple occurrences of VMs do not iterate the same feature. Having address these two issues, in the next section, I will examine the syntactic category of VMs.

6.3.5. Categorical nature of functional verbs (VM)

The discussion so far has assumed the VMs as verbs irrespective of the fact that they express aspects, attitudes and non-attitudes. *iru* and *viTu* express aspectual differences, but others indicate modality. Thus, one may question how these verbs are represented in syntax. In other words, a question arises concerning whether they project aspect phrases and modality phrases in syntax. One can assume an aspectual phrase in parallel to tense and agreement and may argue that this approach allows to license syntactic properties, e.g. aspect morpheme. Yet a close examination reveals that postulating an aspect phrase for Tamil is problematic.

First, there are no overt suffixes similar to tense and agreement, other than the VMs themselves, for hypothesizing an aspect phrase. There are three possible counter examples for this statement. They are *iru*, *(v)iTu* and *kiTTu*. Assuming an aspect phrase, based on the presence of *(v)iTu* and *iru*, and the semantic interpretations of these two verbs, may lead one to suggest Attitudinal Phrase and Modal Phrase as well. Nevertheless, hypothesizing many optional syntactic categories, based on the semantics of lexical elements, is uneconomical and results in complexity in the grammar. That is because such an approach, obviously, leads one to assume an endless number of syntactic categories for a given language. It is also worth noting that the observation that different categories are realized in the same phonological form in Tamil cannot be generalized to assume that the VMs represent different categories, though they have the same form. The reason is that the context where the VMs appear, regardless of whether they are aspectual, attitudinal or modality expressions, is the same. This is contrary to the fact that the different categories represented by the same form have different contexts. (See 5.4.2.2)

Second, it is obvious that these verbs express aspectual differences if and only if they immediately follow verbal participles and function as bound morphemes. This characteristic of *iru* and *(v)iTu* is different from other functional heads which do not depend on their stem or complement category for semantic interpretation and categorial specification. Thus, aspectual verbs differ from other functional categories.

Third, aspect, but not other functional categories such as tense and agreement, can be expressed even when these verbs are absent. For example, as Lehmann (1989:207) points out, the stative main verb *iru* implies progressive when it follows a negative adverbial participle.

151. *tampi ckuul-ukku poo-k-aama iru-kk-ir-aar.*
 brother school-DAT go-k-PART/NEG be-kk-PRES-3/SG/HP
 The brother is not going to school (now)

The aspectual meaning of this sentence may come through the present tense suffix which also implies a continuous action.³¹ Further, the ET speakers use the future tense suffix to convey habitual actions.

31. See Lehmann (1989:67) and Steever (1993:183) for a similar observation.

152. *muunu peer-um kooyil-ilay tang-i-(i)ru-v-aanka.*
 three classifier-INCL Kovil-LOC stay-PART-VM/be-FUTURE-3/PL
 The three people stay in the Kovil.

These observations imply that aspect is not expressed solely by the verbal participle + *iru* construction. Therefore, assuming functional *iru* as an aspect marker does not reveal the whole truth. This means that in Tamil aspect is not realized syntactically, though it is conveyed semantically by the aspectual VMs.

kiTTu, the progressive marker, provides another counter example to the claim that there is not an aspectual phrase in Tamil. Several observations give supportive evidence for solving this problem. The sentence in 151 indicates that the present tense suffix also expresses a progressive act. This property of the present tense suffix undermines the assumption that *kiTTu* is a piece of evidence for postulating an aspectual phrase. Further, this suffix not only denotes the progressive interpretation, but also expresses simultaneous acts. Preceding *iru*, *kiTTu* indicates progressive, whereas before other verbs, *iru* states simultaneity.³²

153. *naan va-ntu kiTTu iru-kk-ir-een.*
 I come-PART SIMUL be-kk-PRES-1/SG³³
 I am coming.
154. *avan kuTi-cci kiTTu paaT-in-aan.*
 he drink-PART SIMUL sing-PAST-3/SG/MAS
 He sang while he was drinking.
 (or having drunk he danced).

Further more, the progressive is expressed by geminating a participle form.

155. *avan kuTi-cci kuTi-cci iru-nt-aan.*
 he dring-PART drink-PART be-PAST-3/SG/MAS
 He was drinking.

32. Ramanujan & Annamalai ((1968) cited in Schiffman (1969:131-134) have analyzed *kiTTiru* in a similar way. According to them *kiTTiru* is the combination of *koo* (= *kiTTu*) simultaneity and *iru* 'stativity'.

33. *kiTTu* in the progressive aspect is glossed as SIMUL(taneous) without giving a detailed glossary. The full glossary should be [SIMULTANEITY-PART].

156. avan kuTi-cci kuTi-cci paaT-in-aan.
 he drink-PART drink-PART dance-PAST-3/SG/MAS
 He danced while he was drinking.

These instances show that assuming *kiTTu* as a piece of evidence for postulating an aspect phrase is not satisfactory.

This assumption does not explain the categorial nature of *kiTTu*. Thus, following Cann & Tait (1994), I assume *kiTTu* is in its own category, called *kiTTu*. The suffix *kiTTu* is always realized immediately after a verbal participle in syntax and cannot be interrupted. This is an indication that it requires a verbal participle as a stem category to be hosted. When this behaviour is accounted for, it implies *kiTTu* is a functional head. Thus, it is represented in a functional tree in the lexicon.

157. kiTTu
 / \
 Part⁰ kiTTu

Assuming *kiTTu* as the suffix of simultaneity is rather different from Schiffman (1969:131-134) who analyzes *kiTTiru* as a progressive suffix. He argues that *kiTTu* is semantically 'durative' only if it is accompanied with *iru*. According to him, sentence 158 has the semantic interpretation of the progressive as it has *kiTTu+iru*. Nevertheless, sentence 159 provides only the simultaneity, but not durativity, since *kiTTu iru* is interrupted by an NP.

158. naan caappiT-Tu kiTTuiru-kk-ir-een.³⁴
 I eat-PART PROG-kk-PRES-1/SG
 I was eating.
159. naan caappiT-Tu kiTTu viiTT-ila iru-nt-een.
 I eat-PART SIMUL house-LOC be-PAST-1/SG
 I was eating at home.
 (I was at home (and/while) I was eating).

34. In examples 158, 162 and 163, I have glossed *kiTTiru* as PROG(essive) following Schiffman.

This observation seems to be appealing, but there are counter examples for this claim. First, the *kiTTiru* construction can be divided into two by inserting an emphatic marker.³⁵ e.g.

160. naan va-ntu kiTT-ee iru-nt-een.
I come-PART SIMUL-EMP be-PAST-1/SG
Certainly, I was coming.
161. ivaru ciri-cci kiTT-ee taan iru-pp-aaru.
this man smile-PART SIMUL-EMP FOCUS be-FUTURE-3/SG/HP
This man always smiles.
(lit. It is smiling that this man always does.)

If uninterruptability is considered to be a primary criterion in defining 'word', the sentences in 160-161 give counter examples for the claim that *kiTTiru* is monomorphemic.

Second, Schiffman claims that *kiTTiru* should be treated as monomorphemic since it can only be negated as a whole. He gives the negative forms of sentences 158-159 repeated here as 162 and 164 and argues that *kiTTu* as the simultaneous marker can be interrupted, but it is not possible when *kiTTiru* acts as the progressive marker.

162. naan caappiT-Tu kiTTu(i)ru-kk-ir-een.
I eat-PART PROG-kk-PRES-1/SG
I was eating.
163. naan caappiT-Tu kiTTiru-kk-a-ll-e.
I eat-PART PROG-kk-INFN-not to be-FN
I am/was not eating.
164. naan caappiT-Tu kiTTu viiTT-ila iru-nt-een.
I eat-PART SIMUL house-LOC be-PAST-1/SG
I was eating at home
(I was at home while I was eating).

³⁵. Schiffman (1969:133-134) has noted this behaviour of *kiTTiru* and has explained in different way.

165. naan caappiT-Tu kiTTu viiTT-ila il-l-a.
 I eat-PART SIMUL house/OBL-LOC not to be-l-FN
 While eating, I didn't stay in the house.
 (lit. I was not at home while eating, but somewhere else).

Schiffman is quite right to observe that *iru* with 'durative' *koo* (or *kol*,) is negated as a whole.³⁶ The impossibility of negating *kiTTu* and *iru* separately is not a result of them being a single word, but it is related to the selectional properties of the negative suffix. It was described in 5.3.1, 5.3.4, and also in 5.4.1 that the negative markers *-aama* or *-aat* are attached only to verb stems. The negative verb *il-* follows either an infinitival form or an NP. Obviously, *kiTTu* does not satisfy any of these selectional requirements of the negative forms. Therefore, in the progressive aspect the negative markers cannot appear after *kiTTu* negating simultaneity, and leaving existence in the affirmative. e.g.

166. *va-nt-u kiTTu-aama iru-kk-ir-een.
 come-PAST SIMUL-NEG/ADV be-kk-PRES-1/SG
 I was not coming (lit. I existed without coming).

Consequently, in this structure the negative markers must always follow *iru*. Explicitly, this evidence negates arguments raised by Schiffman for upholding *kiTTu* and *iru* as a single unit. Therefore, it is concluded here that *kiTTu* and *iru* are two different verbal forms denoting simultaneity and stativity respectively.

Consequently, I assume *kiTTu* to be its own category *KiTTu* and other VMs to be categorially V(erb). This hypothesis, particularly categorizing some functional heads by major category label, seems to be rather unconventional. Nevertheless, this peculiarity can be attributed to the fact that the VMs have mixed properties, and thus, they are hi-brid in nature. They have counterpart main verbs and behave exactly the same as lexical main verbs. Yet they have properties of functional categories whereby they require stem categories to host them. This indicates that they are bound forms. Nonetheless, they differ from both lexical main verbs and other functional heads because of one major characteristic. That is, these verbs express aspect or modality if and only if they accompany verbal participles. In other words, the semantic interpretation of VMs depends on their host category.

³⁶. These forms appear in the dialect that Schiffman described. The equivalent in ET is *kir*.

This shows that the VMs have both lexical and functional properties. As argued above, they are not categorized as aspect or modality. Thus, alternatively, they are categorized as V(erb)s.³⁷

This assumption receives further support from the selectional requirements of tense and verbal participle suffixes. It has been observed that these suffixes are attached to verb stems. Thus, categorizing VMs as Vs allows them to realize as the complements of the tense and verbal participle suffixes. It also avoids disjunction, i.e. in one case the tense suffixes select a verbal complement and in the other an aspectual complement, which may result when VMs are labelled as Aspect or Modality.

6.4. Summary

This chapter has discussed characteristics of verbs in Tamil and classified them into three groups according to their syntactic behaviour. Some verbs are lexical main verbs. Some other verbs, namely *il*, *maadTT -TT* and *-laam*, were recognized as auxiliary verbs depending on the morphological and syntactic irregularities and semantic underspecification. One peculiarity of these verbs is that they also have functional properties. Based on this discussion on auxiliaries, another set of verbs which have been described as auxiliaries by traditional grammarians was questioned, and the conclusion was made that they are not auxiliaries. Subsequently, in order to identify these verbs, their properties were examined. This discussion reveals that these verbs express modality and that they have both lexical and functional properties. As a result, they were introduced as functional heads with V category label.

So far, I have explored the properties of verbal morphology exploiting the functional category approach outlined in chapter 3. In the next chapter, I will analyze nominal morphology, that was described in 2.1.1-2.1.1.3, applying the theoretical framework so far developed.

37. See 7.2 and 7.3 for a similar behaviour of nominal suffixes.

Chapter 7

Deverbal nominals

7.0. Introduction

Three types of deverbal nominals in Tamil were identified in chapter 2. They, as shown in 7-9 in 2.1.1, repeated here as 1-3, are respectively the verbal nouns (VN), the gerundive nouns (GN) and the Participial nouns (PN).

1. paTi-pu
 study-VNOML
 Study
2. paTi-kk-ir-atu
 study-kk-PRES-GNOML
 The fact that X studies Y (= Studying)
3. paTi-kk-ir-a-van
 study-kk-PRES-ADJ-PNOML/3 SG MAS/
 The one who studies

The latter two, as exemplified in 2.1.1, 2.1.1.2 and 2.1.1.3, contain verbal and nominal, or inflectional and derivational, suffixes. The GN in 2 has a verb stem, tense suffix and the nominalizer *-atu*, and the PN in 3 has a verb stem, tense suffix, the adjectival suffix *-a* and the nominal suffix *-van*. Obviously, tense suffixes, as given in 4.3, constitute a part of verbal forms. Nevertheless, the adjectival suffix *-a*, as explained in 5.4.2.1, is closely associated with to nominal structures. The adjectival participles either precede and modify

nouns (or noun phrases) or attach to a pronominal suffix, e.g. *-van*, *-var*, *-val* *-tu*, and *-vunka* to form PNs. Further, these

two categories, e.g. tense suffixes on the one hand and the adjectival suffix and the nominalizers of GNs and PNs on the other, can be identified as inflectional and derivational according to the traditional grammatical terms. Thus, GNs and PNs are problematic to the morphological theories which postulate a distinction between inflections and derivations. Therefore, assuming no distinction between these two types of suffixes, I analyzed verbal morphology in Tamil in the last three chapters.

The analysis of verbal morphology, illustrated in chapters 4 and 5, also has shown that functional heads have varying degrees of functional status. The suffixes such as tense, agreement and negation are fully fledged functional categories with all required properties. They are bound morphs that require stem categories; in a structure they have a fixed position; they can head their own maximal projection; also, they may have Kase features. Yet the functional verbs, described in 6.3-6.3.5, have a different number of lexical and functional properties. Some, as seen in 6.3.4, are more verb-like; others are equal to bound morphs. One crucial characteristic of both of these types of morphs is that they require a stem category as a syntactic complement. Hence, complement selection is assumed to be a significant and determining characteristic of functional heads. All other properties contribute additional qualities to confirm the functional status of the form in question.

Further, during the discussion presented in 4.4, 5.2 and 5.3, it was noted that some functional heads are monomorphemic, but others are multimorphemic. According to the functional category approach to morphology developed in this dissertation, these functional categories build syntactic structure(s) in the syntax mirroring the morpheme structure of words. The analysis thus far has illustrated the morphosyntactic properties of suffixes in verbal forms and the interaction between word structure and syntactic structure. Implicit to this discussion is that it has partially analyzed morphosyntactic properties of PNs and GNs by analyzing tense, negative and adjective morphs that occur in these nouns. Thus, the discussion presented so far has partially fulfilled the main objective of this dissertation, that is studying morphosyntactic properties of the deverbal nominals in Tamil. Accordingly, this chapter explores the properties of the suffixes of deverbal nominals and their derivation. Subsequently, this syntactic analysis of GNs and PNs is employed to differentiate VNs from other two types of deverbal nouns. As a result, VNs are identified as lexical, because they are similar to ordinary nouns in every respect.

To begin with in 7.1 and 7.2, I illustrate the properties and syntactic derivation of GNs and PNs. Then, in 7.3, I move on to explore the properties of VNs and to differentiate them from GNs and PNs.

7.1. *-atu*, the GN suffix as a F-head

In 2.1.1.2 and in example 2 above, it was noted that GNs are formed by attaching *-atu* to a tense suffix or to the negative suffix *-aat* preceded by a verb stem. The crucial requirement for the appearance of the GN suffix is that it must accompany a tense morpheme. This indicates that the suffix requires a tense stem to host it. Therefore, the GN suffix is identified as a functional head, on the assumption that complement selection is a property of the functional categories.

When the GN suffix is characterized as a functional head, it must be given a categorial specification. There are two possible approaches to fulfil this requirement. One possibility is to assume that *-atu* is its own category and that categorially it is atu^0 . This is consistent with the categorization of *kiTTu*, shown in 6.3.5. This allows atu^0 to project atuP in syntax. The other plausible solution is to identify *-atu* as category N(oun). That is because the suffix has some properties of nouns, e.g. it can receive case suffixes. Also, it is well known that NPs receive case and theta roles from the theta and case assigners. If *atu* projects up to atuP , then it must be assumed that case and theta properties are assigned to both NPs and atuPs . This creates unnecessary complexity in the grammar. Further, postulating an atuP may give another peculiar category in an NP position. Therefore, the GN suffix is categorized as N(oun) and is represented in a functional tree.



This functional head differs from the homophonous third person neuter agreement suffix. These differences are sketched next before proceeding to illustrate the syntactic derivation of GNs.

7.1.1. *-atu* in GNs vs *-atu*, the agreement suffix¹

-atu appears in two contexts: I argued in 7.1, that *-atu* is a nominal suffix with the properties of functional heads. A homophonous form also appears as the third person, neuter, agreement suffix. In both instances *-atu* selects a tense complement. In spite of this common property, it differs according to the contexts where it occurs. Thus, *-atu* in these two environments is characterized as two different functional heads based on the distinct properties which are sketched below.

First, GNs, like simple nouns, can be inflected for case, but this is not a property of finite verbs. The sentences in 5-7 contain GNs inflected for the accusative, dative and locative cases.

5. avar ankee iru-pp-at-ay naan veru-kk-ir-een.
 he there be-FUTURE-GNOML-ACC I dislike-kk-PRES-1/SG
 I do not like him being there.

6. appaa maataray-kku poo-r-at-ukku
 father Matara-DAT go-PRES-GNOML-DAT
 aayattam-aa-n-aar.
 ready-be-PAST-3/SG/HP
 The father got ready to go to Matara.

7. pullay-kku paal kuTu-kk-ir-at-ila artam il-l-a(y).
 child-DAT milk give-kk-PRES-GNOML-LOC use not to be-1-FN
 Giving milk to the child is useless (now).

In 6, the dative case marked GN indicates purpose. When a locative case suffix is added to a GN, as in 7, it has an adverbial function and expresses the means by which the action is performed or the circumstances under which things described took place. Obviously, inflecting for case is not a property of agreement markers. Thus, the nominal *-atu* is distinguishable from the verbal one.

Second, post-positions such as *patti* 'about' *naala* 'because of' follow nouns, not finite verbs. In particular, *patti* requires an accusative marked noun to precede it. Further,

¹. See 7.3. for a discussion on the differences of *-atu* of GNs on the one hand and *atu*, the third person neuter pronoun, and *-tu* of PNs on the other hand.

GNs can satisfy the theme arguments of *col* 'say', the cognitive verb *teri* 'know' and the perceptual verb *paar* 'see' as shown in 8-10.²

8. *niinka velinaaTT-ukku poo-r-at-ay-p patti*
you abroad/OBL-DAT go-PRES-GNOML-ACC-p about
en-akku *teri-y-um*.
I/OBL-DAT know-y-FN
I know that you are going abroad.
(lit. I know about your going abroad).

9. *ciitaa katay con-n-at-ay-p patti*
Sita story say-PAST-GNOML-ACC-p about
ammaa con-n-icci.
mother say-PAST-icci
Mother told (me) that Sita told the story.
(lit. The mother told me about Sita(s) telling the story (to some one))

10. *avar paTi-kk-ir-at-ay naan paat-t-een.*
he study-kk-PRES-GNOML-ACC I see-PAST-1/SG
I saw him reading (the book).
(lit. I saw him reading (some thing))

Apparently, finite sentences do not occur in these contexts.

² Annamalai (1969) (as cited in Lehmann 1989:302) points out that the above types of object NPs of these verbs are always interpreted as factive complements; i.e. true proposition. Therefore, they do not realize as objects to the non-factive verbs such as *karuttu* 'imagine' *poy collu* 'lie'. This causes the unacceptability of the following example.

*[*kummaar maturay-kku-p poo-n-at-ay*] *raajaa*
kumaar Maduray-DAT-p go-PAST-GNOML-ACC Raja
con-n-aan. aanaal kumaar poo-k-a-v-il-ay.
tell-PAST-3/SG/MAS but Kumar go-k-INFN-v-not to be-FN
* Raja told the fact that Kumar went to Maduray. However, Kumar didn't go.

(Lehmann (1989:302) example 687)

(Some changes have been made to the transcription and to a part of the glossary in order to be consistent it with the transcriptions and glossaries given in this dissertation)

11. * avar paTi-kk-ir-aar naan paat-t-een.
 he study-kk-PRES-3/SG/HP I see-PAST-1/SG
 I saw him reading (the book).
 (lit. I saw him reading (some thing))

Yet they can precede complementizers in complex sentences as other embedded finite sentences do.

12. ciitaa katay con-n-atu nnu
 Sita story say-PAST-3/SG/NEUTER COMP
 ammaa con-n-icci.
 mother say-PAST-icci
 Mother told (me) that Sita told the story.

This comparison indicates that *-atu* has distinct functions in different contexts and hence, the forms with *-atu* belong to two distinct categories.

Third, in Tamil predicative sentences may consist either of two nouns or of a noun followed by an adjective.

13. avar aaciriyar.
 he teacher
 He is a teacher.
14. atu nalla-tu.
 it good-3/SG/NEUTER/PRO
 It is good.

GNs can appear in the subject position of this type of predicate structure, as seen in 15-16.

15. paavam cey-y-ir-atu keTTa-tu.
 sin do-y-PRES-GNOML bad-3/SG/NEUTER/PRO
 Sinning (is) bad.
16. kallu kuTi-kk-ir-atu avar-uTaya palakkam.
 toddy drink-kk-PRES-GNOML he-GEN habit
 Drinking toddy (is) his habit.

In examples 15 and 16, *keTTatu* '(is) bad' and *palakkam* '(is) a habit' respectively describe the subjects *ceyyiratu* 'doing' and *kuTikkiratu* 'drinking'. These subject forms cannot be finite verbs, since such an analysis results in unacceptability. First, if these forms are finite clauses, then the predicate clauses that follow the *-atu* forms do not have subjects to be properly interpreted. Second, when subjects are not present, predicate sentences are not complete and are unacceptable, as found in 18.

17. paavam cey-y-ir-atu keTTa-tu.
sin do-PRES-GNOML bad-3/SG/NEUTER/PRO
Sinning (is) bad.
18. * (avar) paavam cey-y-ir-atu. 0 keTTa-tu.
(he) sin do-PRES-GNOML 0 bad-3/SG/NEUTER/PRO
(He) sins. (It is) bad.

Nevertheless, the sentence in 18 is acceptable when the subject requirement of *keTTatu* is satisfied. e.g.

19. raajaa paavam cey-y-ir-atu. atu keTTa-tu.
Raja sin do-y-PRES-3/SG/NEUTER that bad-3/SG/NEUTER/PRO
Raja sins. It (is) bad.

This also affirms that *-atu* of GNs differs from the agreement suffix *-atu*.

Fourth, the gerundive *-atu* can satisfy the complement of verbs such as *paar* 'see', *col* 'say', but a finite clause does not occur in this position.

20. coomaa vellanaa va-nt-atu
Soma soon come-PAST-GNOML
paa-ttu-T-Tu naan aaccariya
see-PART-VM/leave-PART I surprise
paT-Tu-p-poo-n-een.
receive-PART-p-VM/go-PAST-1/SG
I was surprised that Soma came so soon.

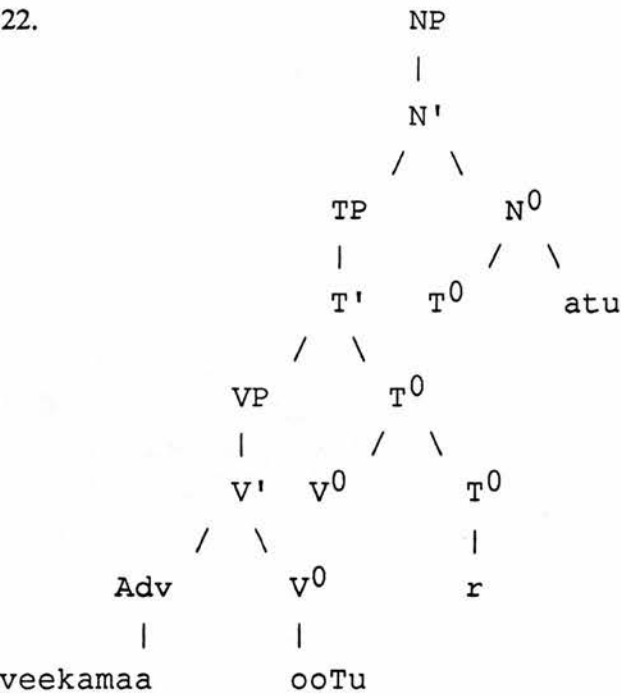
When *vantatu* in 20 functions as a main verb, the following clause must have a subject. For example,

21. *coomaa vellanaa va-nt-atu.*
 Soma soon come-PAST-3/SG/NEUTER
 atu paa-ttu-T-Tu naan aaccariya
 that see-PART-VM/leave-PART I surprise
 paT-Tu-p-poo-n-een.
 receive-PART-p-VM/go-PAST-1/SG
 Sita came soon. I was surprised to see her.

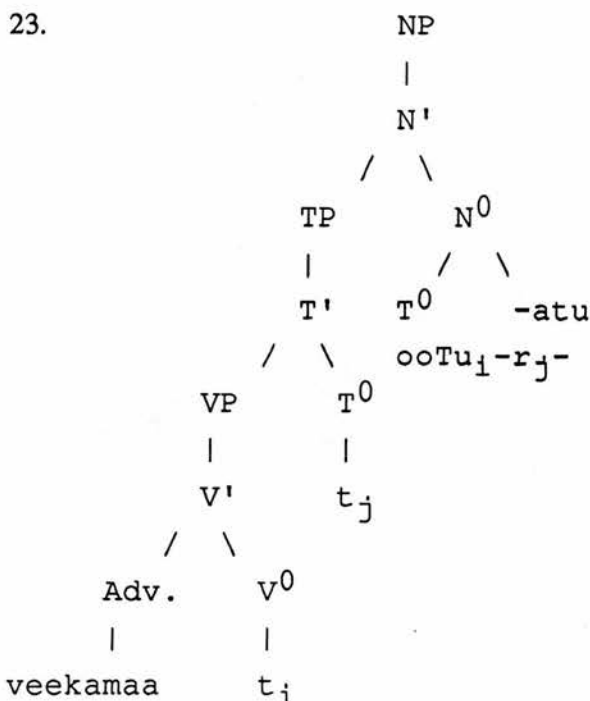
To summarize, in this section the nominal *-atu* has been differentiated from the third person, neuter, agreement suffix. They are similar in that they select tense complements, and thus, are identified as functional heads. Nevertheless, they function differently according to the contexts where they appear. Therefore, they are assigned two different functional specifications in the lexicon with their complements and idiosyncratic properties.

7.1.2. Derivation of GNs

I argued in 7.1 that the GN suffix is a functional head with the category label N and a tense complement. Therefore, *-atu* projects as a N^0 node in the syntax and is assigned a TP complement. A tense suffix, then, projects to head this TP. T^0 selects a VP complement as the tense suffix needs a verb stem to host it. These projections result in the syntactic tree given in 22 for the GN *ooTuratu* 'running'.



This structure is not well formed since there are empty heads and stranded suffixes. As illustrated in the preceding chapters, this violates the licensing principles such as the PFLP and MLH, given in 40 and 43 in chapter 3. In order to satisfy these well-formedness conditions, heads are moved to the empty X^0 nodes of the immediately dominating categories. V^0 raises to V^0 of T^0 , and then T^0 as a whole moves to T^0 of N^0 . This gives the well formed GN.

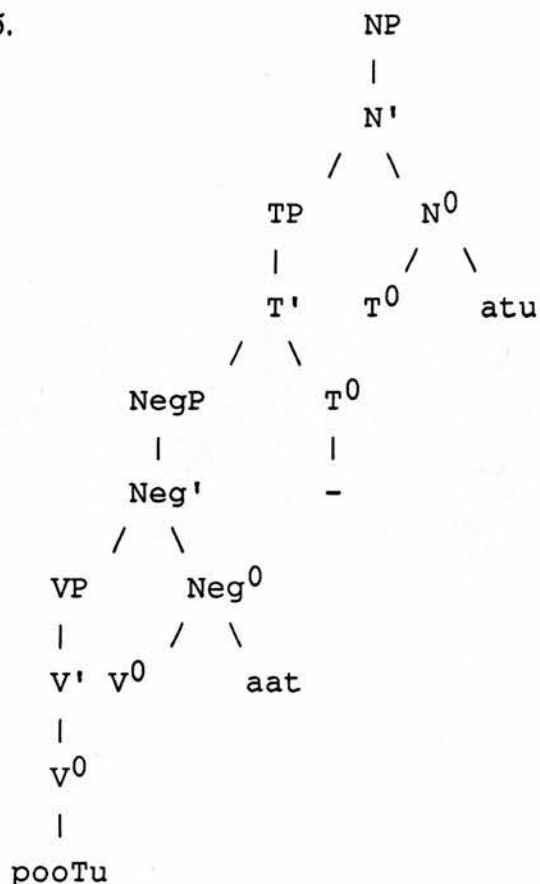


These trees show that *-atu* can appear wherever it can satisfy its complement requirements. This implies *-atu* follows not only the overt tense suffixes, but also a covert (syncretized) tense morpheme as evident from the GNs with the negative suffix.

24. naan teenkaa pooT-aat-att-ukku
 I coconut put-NEG/TENSE-GNOML/OBL-DAT
 appaa-v-ukku koovam poo-y-iru-cci.
 father-v-DAT anger go-PART-VM/be-cci
 The father got angry (with me) since I did not pluck the coconuts.

As illustrated in the syntactic tree in 54 in chapter 5, the negative suffix is realized as Neg^0 , since the negative morpheme is the one that is consistent with the possible lowest position of the morpheme structure given in 36 in chapter 5. This means that in a tree with *-aat* the tense node is not filled because projecting another tense suffix to occupy this position violates the EP. Hence, the basic syntactic tree for a negative GN is as 25.

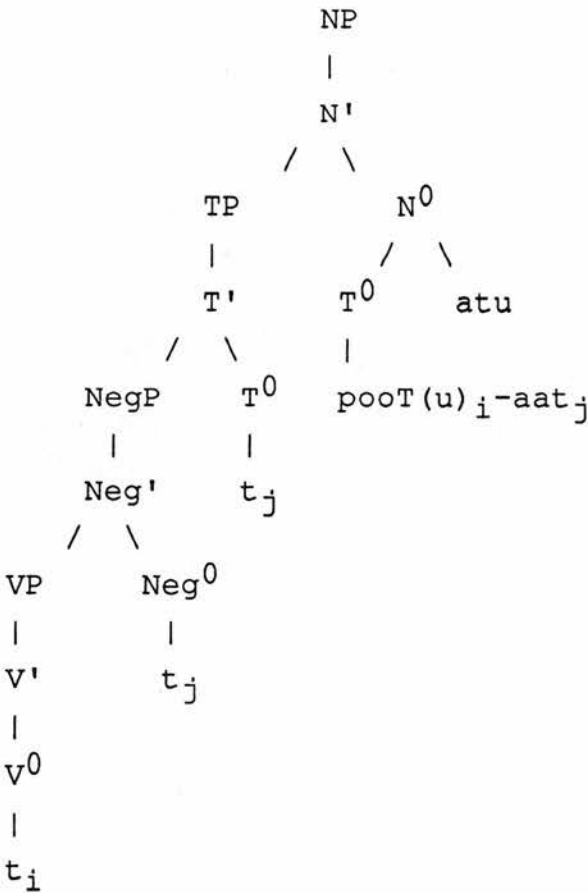
25.



For the derivation of a well formed GN, the verb moves to the complement position of Neg^0 . Accordingly, the structure in Neg^0 raises to T^0 licensing the tense morpheme in its head position, and then, it moves to the T^0 complement of N^0 .³

³. Compare these trees to the trees 54-55 in chapter 5.

26.

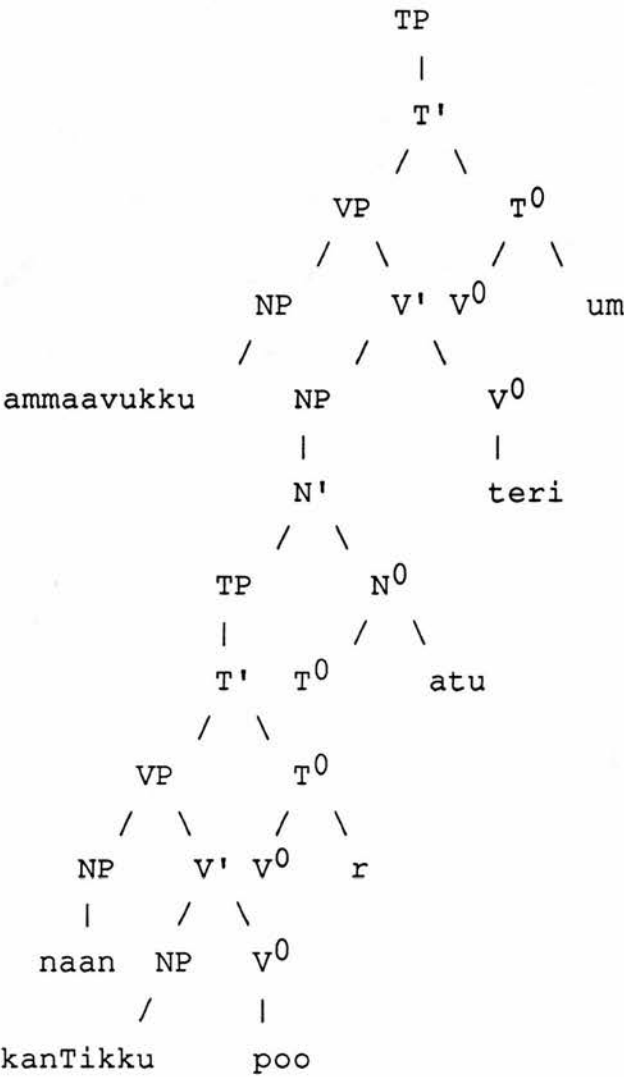


GNs have both verbal and nominal properties. Therefore, they, as nouns, are realized wherever NPs can appear, e.g. before post positions and in the argument positions of a sentence. In 27, the GN precedes the post position *aaka* 'for' and in 28, it occurs in the theme theta position of the verb *teri* 'know'.

27. *raajaa peenaa vaank-ir-att-ukk-aaka*
 Raja pen buy-PRES-GNOML/OBL-DAT-for
 kaTay-ukku poo-n-aar.
 Shop-DAT go-PAST-3/SG/HP
 Raja went to the shop to buy a pen.
28. *naan kanTi-kku poo-r-atu ammaa-v-ukku teri-y-um.*
 I Kandy-DAT go-PRES-GNOML mother-v-DAT know-y-FN
 The mother knows that I go to Kandy.

This behaviour of GNs, e.g. appearing in NP positions of a sentence, is exemplified by the syntactic tree for 28, given in 29.

29.



As it is obvious from trees in 23, 25, 26, 29, verb stems in GNs have their own maximal projections to which they can project their syntactic properties. Therefore, the verbal properties of a GN derive from the verb stem that it contains. As seen in 23, they can also be modified by adverbs. It must also be noted that GNs can be derived by applying syntactic rules and that they have verbal properties. Thus, they provide a piece of evidence to differentiate syntactic word formation from the lexical one.

To summarize, this section has characterized *-atu* in GNs as a functional head with a tense complement. Hence, in a syntactic tree all constituents of a GN, e.g. the verb stem, tense or negative suffix and the nominalizer, have their own maximal projections.

As a result, input verbs of GNs can project their syntactic properties to syntax and can be modified by adverbs.

One of the advantages of this analysis is that the syntactic word formation can be employed to distinguish syntactically derived words from lexical nouns. Further, characterizing *-atu* as a functional head, this analysis has expanded the notion 'functional category' to include nominal categories as well. PNs provides further examples for this analysis. Thus, the next section discusses the properties and the derivation of PNs.

7.2. PN suffixes are F-heads

PNs, as described in 2.1.1.3, are generated by attaching the nominalizers *-van*, *-var*, (*-val*), *-tu* and *-vunka* to the adjectival participles which are formed by attaching the adjectival suffix *-a* to a tensed verb. However, it must be noted - as illustrated by examples 64-65 and 68-69 in 2.1.1.3 and by the example in 104 in 5.4.2.1 - that the pronominal suffixes do not follow the adjectival participles with the future tense suffix *-p* and the future adjectival suffix *-um*. This occurrence relationship of the pronominal suffix of PNs indicates that they are bound morphemes, and that they can only appear following adjectival participles with the suffix *-a*. In parallel to the GN suffix *-atu*, they are also assumed to be able to head their maximal projection(s). Therefore, invoking the assumption that the ability to select a complement is a prominent property of a functional head, the PN suffixes are introduced as functional heads.

The PN suffixes, as functional heads, also must have a categorial specification. These suffixes have parallel distribution to the ordinary nouns. For example, the PN suffix in 30 can be replaced by a noun as in 31 without resulting ungrammaticality.

30. *neettu va-nt-a-van*
 yesterday come-PAST-ADJ-PNOML/3 SG MAS/
 The one who came yesterday

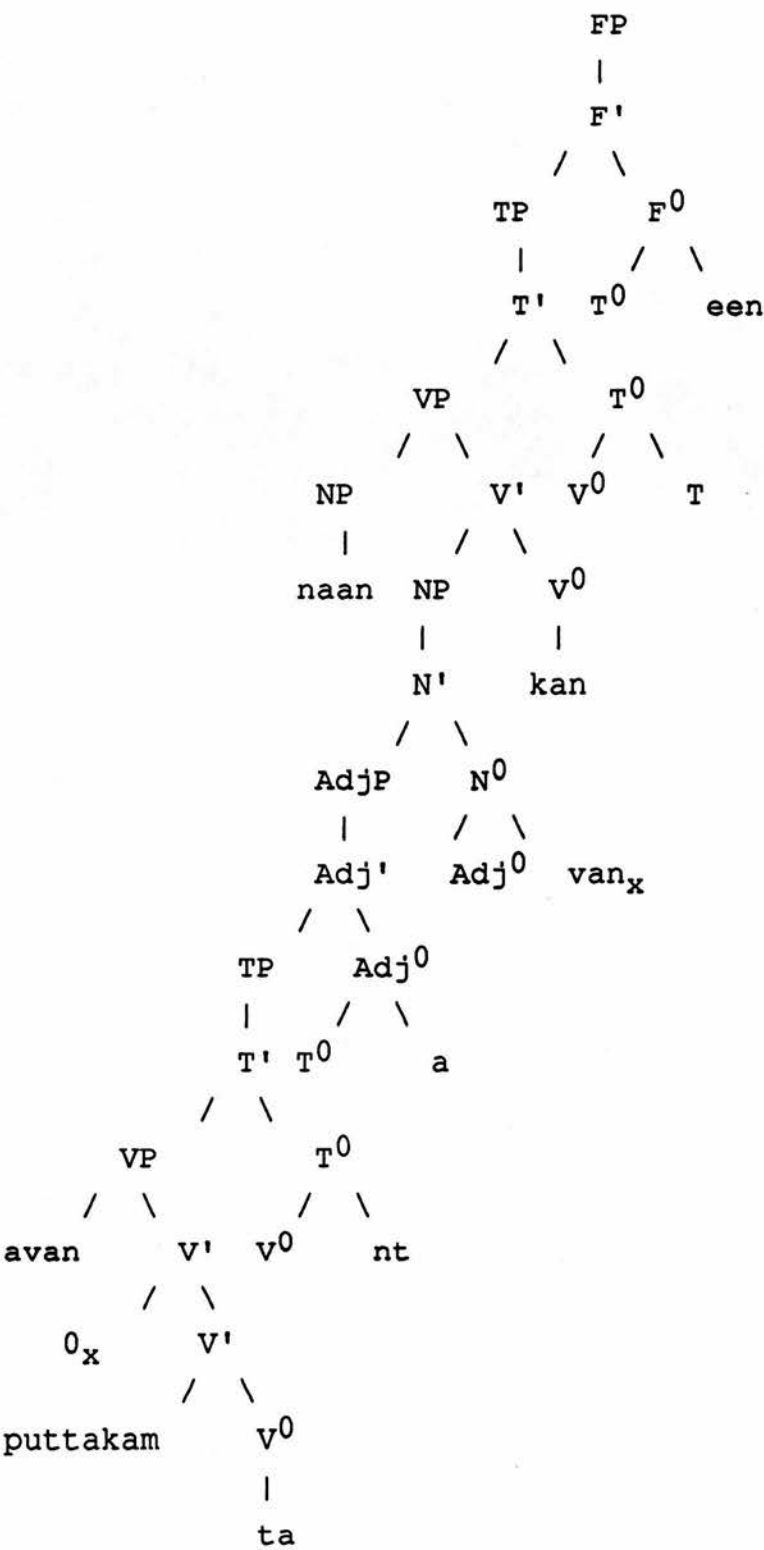
31. *neettu va-nt-a aalu*
 yesterday come-PAST-ADJ person
 The person who came yesterday

Moreover, like GNs, PNs receive case, and are assigned theta roles by the verb of the sentence where they appear. Therefore, they are categorized as N(ouns), though they are functional in nature.

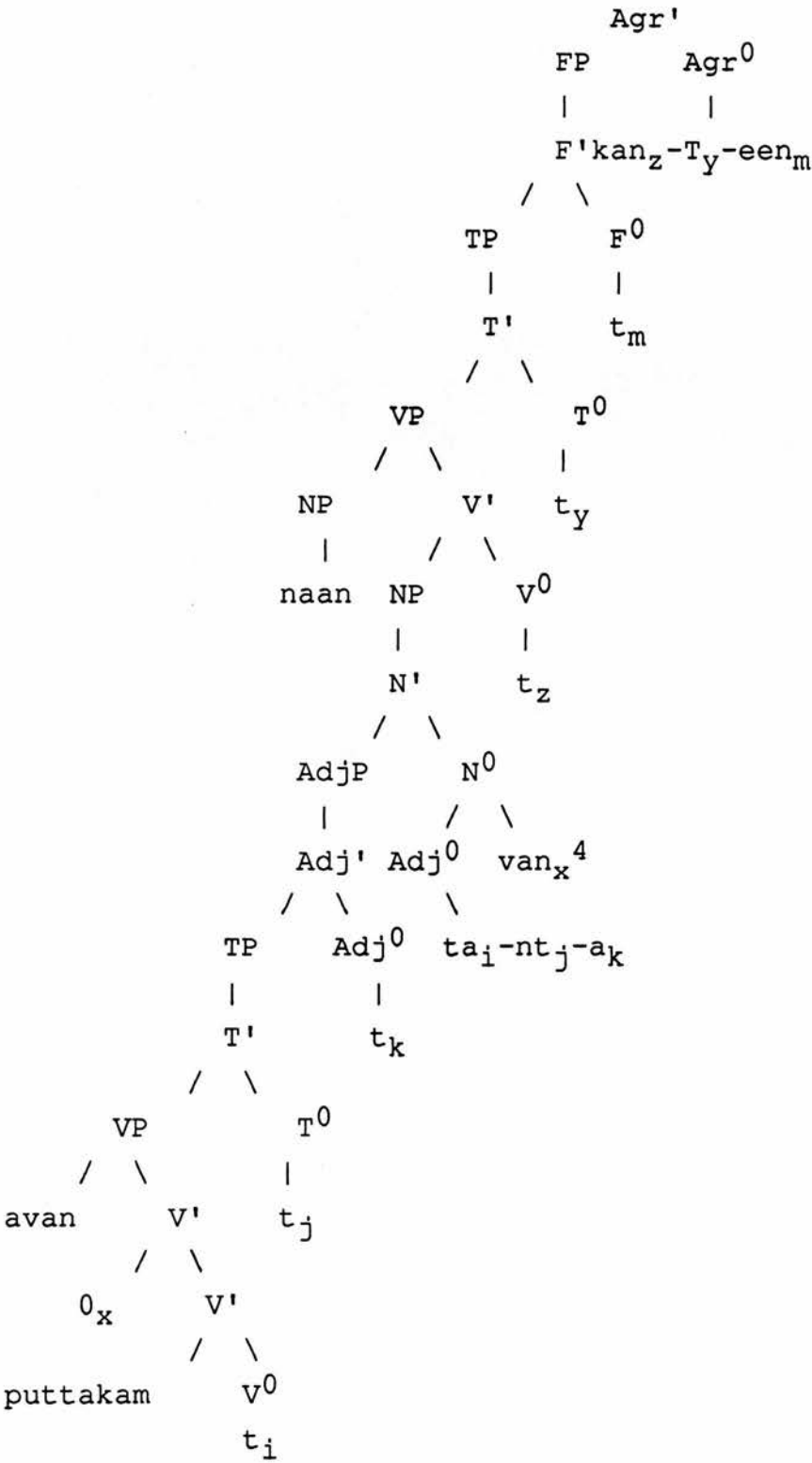
- 32.
- $$\begin{array}{c}
 N \\
 / \quad \backslash \\
 Adj^0 \quad -van
 \end{array}$$

Accordingly, PN suffixes project as N^0 s into the syntax, and take adjectival participles as complements. The adjectival participles contain, as described in 5.4.2.1, the adjectival suffix *-a* preceded by a tense suffix and a verb stem. All these categories have their own maximal projections, and can project their syntactic properties independently. Thus, verbs in PNs, like those of GNs, have their syntactic properties realized in the syntax. These issues are exemplified by the tree for sentence 33, which is illustrated in 34.

33. *avan puttakam ta-nt-a-van-ay naan kan-T-een.*
 he book give-PAST-ADJ-PNOML/3 SG MAS/-ACC I see-PAST-1/SG
 I saw the one to whom he gave a book.



The derivation of a well formed PN and a verbal form is carried out by moving heads as described in 3.5.2 and 4.4.2. This results in the syntactic tree in 35.



4. At present, the actual syntactic relationship between the PN suffixes and the arguments of the input verbs of PNs is not addressed since that analysis will take us a far from the main focus in this dissertation.

This section so far has shown the formation of PNs assuming the PN suffixes are functional heads. Additionally, some sketchy remarks were made on the similarities of GNs and PNs. Before proceeding further, the properties of these two types of deverbal nouns are compared in the next section.

7.3. PNs vs GNs

The trees in 23 and 35 exemplify close similarities between GNs and PNs. Obviously, they show that the input verbs of GNs and PNs head their own maximal projections. Consequently, these verbs can freely project their syntactic properties, and can be modified by adverbs.

This analysis also illustrates the regularity of GNs and PNs. The nominalizers of GNs and PNs, unlike those of VNs, can be attached respectively to tensed verbs and adjectival participles without idiosyncrasy. e.g.

36. va-ntu-(i)ru-nt-a-van
 come-PART-VM/be-PAST-ADJ-PNOML/3 SG MAS/
 The one who has come

37. va-ntu-(i)ru-nt-atu
 come-PART-VM/be-PAST-GNOML
 The fact that he has come
 (lit. his coming (arrival) in the past)

38. vaaTi-p-poo-i-T-T-a-t-a(y)
 weather-p-VM/go-PART-VM/leave-PAST-ADJ-PNOML/3 SG MAS/-
 -ACC
 The thing (plant) that weathered away

The PN and GN, in 36-37 respectively, have VMs with aspectual meaning inside the nominalizers. The PN in 38 contains VMs with both aspect and attitude verbs.

Further, sentences in general can have any number of GNs and PNs as they can contain many ordinary nouns.

39. inliic-ila katay-kk-ir-attu-(u)kku
 English-LOC speak-kk-PRES-GNOML/OBL-DAT
 peec(u)-ir-attu-(u)kku paTi-kk-a-n-um.
 converse-PRES-GNOML/OBL-DAT study-kk-INFN-must-FN
 We/you have to /need to learn (how to) speak English.

These instances show that the functional category approach can explain the syntactic similarities of PNs and GNs in a principled way. The same analysis can also illustrate the differences of these nouns.

First, it is also interesting to note that *-atu* of GNs and *-tu* in PNs have different syntactic and semantic properties. *-atu* is the only suffix that attaches to tense suffixes to generate GNs, but *-tu* in PNs is one of the several suffixes that follow an adjectival participle to form PNs. More importantly, *-tu* in PNs indicates a thing (an unspecified object) and is consistent with *-tu* of the demonstrative pronoun *a-tu* 'that-thing'. Thus, *-tu* of PNs can be substituted by ordinary nouns without changing the grammaticality of the noun. *-tu* in example 40 indicates unspecified object that has been read. In 41, in the same context *naaval* appears to express a specific object without resulting in ungrammaticality.

40. nimal paTi-cc-a-tu
 nimal study-PAST-ADJ-PNOML/3 SG NEUTER/
 nalla-tu.
 good-3/SG/NEUTER/PRO
 Thing (the book, or paper) which Nimal studied is good.
41. nimal paTi-cc-a naaval nalla-tu.
 nimal study-PAST-ADJ novel good-3/ SG/NEUTER/PRO
 The novel which Nimal studied is good

Yet *-atu* of GNs cannot be segmented or substituted by any other noun. If *-atu* is substituted by a NP, then, the ungrammatical [verb + tense + noun] combination will result, as exemplified in 40a and 41a.

- 40a. nimal paTi-cc-atu nalla-tu.
 nimal study-PAST-GNOML good-3/SG/NEUTER/PRO
 The fact that Nimal studies is good (Nimal's studying good)
- 41a. * nimal paTi-cc-nikalcci nalla-tu.
 nimal study-PAST-fact/event good-3/ SG/NEUTER/PRO
 The fact that Nimal studies is good (Nimal's studying good)

Second, the possibility of replacing the PN suffixes, but not that of GNs, by ordinary nouns reveals a significant difference between GNs and PNs. That is, the nominalizers of PNs represent one argument of the input verbs. The PN suffixes, like *-er* in the actor nominals in English, satisfy the theta roles of the input verb. Hence, the arguments associated with the PN suffixes are not realized inside the maximal projections of the VPs that appear in the syntactic trees of PNs. For example, *-van* of *camaykkiravan* in 42 represents the agent of *camay* 'cook'. Therefore, another NP cannot be introduced into the VP in the PN to express the agent of the input verb. If an NP is projected to represent the agent of the input verb of a PN, it results in unacceptability. e.g.

42. O_i camay-kk-ir-a-van_i va-nt-aan.
 O_i cook-kk-PRES-ADJ-PNOML_i/3 SG MAS/ come-PAST-3/SG/MAS
 The cook came. (lit. The one who cooks came).
43. * avan_i camay-kk-ir-a-van_i
 he_i cook-kk-PRES-ADJ-PNOML_i/3 SG MAS/
 va-nt-aan.
 come-PAST-3/SG/MAS
 ? He_i who cook_i came.
44. * avar_i nalla paTi-cc-a-var_i aaciriyar.
 he_i good study-PAST-ADJ-PNOML_i/3 SG MAS POLITE/ teacher.
 * He_i a scholar_i is a teacher_i.

It is noteworthy, here, that the PN suffixes represent only the actor, experiencer (subject), patient (direct object) and the receiver (indirect object).⁵ The indirect object and the experiencer in 45 and 47 respectively are nominalized in 46 and 48.

45. ciri nimal-ukku kaacu koTu-tt-aar.
 Siri Nimal-DAT money give-PAST-3/SG/HP
 Siri gave money to Nimal.
46. ciri kaacu koTu-tt-a-van
 Siri money give-PAST-ADJ-PNOML/3 SG MAS/
 The one to whom Siri gave the money
47. appaa-v-ukku raani-y-a piTi-kk-aat-u.
 father-v-DAT Rani-y-ACC like-INFN-NEG/TENSE-FN
 Father does not like Rani.
48. raani piTi-kk-aat-a-van
 Rani like-kk-NEG/TENSE-ADJ-PNOML/3 SG MAS/
 The one who does not like Rani

The dative case marked nouns cannot be relativized, as evident from the ungrammaticality of 50 and 52, when they imply respectively the place where the motion ended and the person on whom the goal of purpose is based.

49. avan viiTT-ukku va-nt-aan.
 he house/OBL-DAT come-PAST-3/SG/MAS
 He came home.
50. * avan va-nt-a-tu
 he come-PAST-ADJ-PNOML/3 SG NEUTER/
 The (*thing) place where he came
 (indicating the end point of the motion)
51. naan appaa-v-ukku caTTay-a vank-in-een.
 I father-v-DAT shirt-ACC buy-PAST-1/SG
 I bought a shirt for father.

⁵. In addition to these, the ordinary relative clauses can relativized goal of motion as well. See Lehmann (1989:288-293) for a further discussion.

52. * naan caTTay-a vaank-in-a-van
 I shirt-ACC buy-PAST-ADJ-PNOML/3 SG MAS/
 The one for whom I bought a shirt
 (Denoting the receiver or purpose)

Further, the nouns inflected for the instrumental (53-54), sociative (55-56), locative (57-58), ablative (59-60) and genitive (61-62) cases also cannot be relativized.⁶

53. avar peenaa-v-aala elutu-r-aar.
 he pen-v-INSTR write-PRES-3/SG/HP
 He writes with a pen.
54. * avar elutu-r-a-tu
 he write-PRES-ADJ-PNOML/3 SG NEUTER/
 That with which he writes
55. nimal aaciriy-ooTa kaTay-ukku poo-n-aan.
 Nimal teacher-SOCI shop-DAT go-PAST-3/SG/MAS
 Nimal went to the shop with the teacher.
56. * nimal kaTay-ukku poo-n-a-van
 Nimal shop-DAT go-PAST-ADJ-PNOML/3 SG MAS/
 The one with whom Nimal went to the shop
57. appaa viiTT-ila iru-kk-ir-aar.
 father house/OBL-LOC be-kk-PRES-3/SG/HP
 The father is at home.
58. * appaa iru-kk-ir-a-tu
 father be-kk-PRES-ADJ-PNOML/3 SG NEUTER/
 The place where father stays/lives

⁶. These can be expressed through the co-relatives. See Lehmann (1989:349-352).

59. caamaa-v-iTam iruntu kaTitam va-nt-atu.
Sama-v-ABL (from) letter come-PAST-3/SG/NEUTER
A letter came from Sama.
60. * kaTitam va-nt-a-val
letter come-PAST-ADJ-NOML/3 SG FEM/
? The one from whom a letter came
61. naan nimal-in puttakam vaaci-cc-een.
I Nimal-GEN book read-PAST-1/SG
I read Nimal's book.
62. * naan puttakam vaaci-cc-a-van
I book read-PAST-ADJ-PNOML/3 SG MAS/
The one whose book I read

Steever (1981), as cited in Lehmaan (1989:290), gives reasons for this restriction of the PNs. According to him, the nouns with the sociative case markers *-uTan*, *-ooTu* cannot be relativized, because the bound post positions are stranded, if a noun inflected for the sociative case is relativized. Steever's arguments can be generalized in order to include the PNs. Thus, adjunct phrases cannot be relativized since post position would be stranded. However, neither Steever nor Lehmann comment on the dual behaviour of the dative case marked nouns.⁷ The possible explanation for this disjunction of the dative case marked nouns may relate to the distinction between arguments and adjuncts. The arguments of a lexical item can be relativized, but not the adjuncts. Therefore, dative marked arguments are nominalized, but not dative marked adjuncts.

This evidence shows one of the prominent characteristics of PNs. That is, their nominalizers represent one of the grammatical functions of the input verbs of PNs.

GNs differ from PNs in this respect. The reason is that the nominalizer in GNs does not have any syntactic relationship with the NPs in the theta or argument positions of the input verb. Therefore, all arguments of the input verb of a GN are realized within the VP, as seen in 63. If a noun follows a GN representing one of the arguments of the input verb or *-atu* is replaced by a noun, then ungrammaticality results, as evident from 64-65.

⁷. Caroline Heycock (pc) pointed out that in Japanese the dative case has a similar behaviour in that it is a case marker in some instances whereas it acts as a post position in other contexts.

63. nimal naaval paTi-cc-atu nalla-tu.
 nimal novel study-PAST-GNOML good-3/SG/NEUTER/PRO
 It is good that Nimal studied the novel.
 (The fact that Nimal studied the novel is good.)
64. * nimal 0_i paTi-cc-atu naaval_i nalla-tu.
 nimal 0_i study-PAST-GNOML novel_i good-3/SG/NEUTER/PRO
 ? The novel (that) Nimal's studying is good.
65. * nimal 0_i paTi-cc-naaval_i nalla-tu.
 nimal 0_i study-PAST-novel_i good-3/SG/NEUTER/PRO
 ? The novel (that) Nimal's studying is good.

Interestingly, any noun that may appear inside a GN can be dropped without causing ungrammaticality. Consequently, the resulting sentence gives universal application in relation to the omitted noun. For example,

66. nimal paTi-cc-atu nalla-tu.
 nimal study-PAST-GNOML good-3/SG/NEUTER/PRO
 The fact that Nimal studied is good.
67. naaval paTi-cc-atu nalla-tu.
 novel study-PAST-GNOML good-3/SG/NEUTER/PRO
 Studying (reading) novels is good.
68. paTi-cc-atu nalla-tu.
 study-PAST-GNOML good-3/SG/NEUTER/PRO
 Studying is good.

The third difference between PNs and GNs is that the former have some properties of ordinary nouns whereas the latter do not. In example 69, the simple noun *caappaaTu* 'meal, food' has two modifiers.

69. ruciyaana nalla caappaaTu
 tasteful good food
 tasty, good food

When two modifiers precede a noun, they function differently and are realized in specific positions. Thus, the outer quality or quantity is realized outside the inner quality. In 69, *nalla* expresses quality whereas in 70, it denotes quantity. So in 70, it is realized outside the adjective that expresses quality.

70. nalla ruciyaana caapaaTu
 good tasteful food
 Very tasty food

The same ordering relationship is also found in PNs. In 71, the adjective that implies the external act or event is realized outside the one that shows the internal characteristic. e.g.

71. neettu va-nt-a, kannu
 yesterday come-PAST-ADJ, eye
 teri-y-aat-a-van
 know-y-NEG/TENSE-ADJ-PNOML/3 SG MAS/
 The blind man who came yesterday,
 (lit. The one who is blind and who came yesterday)

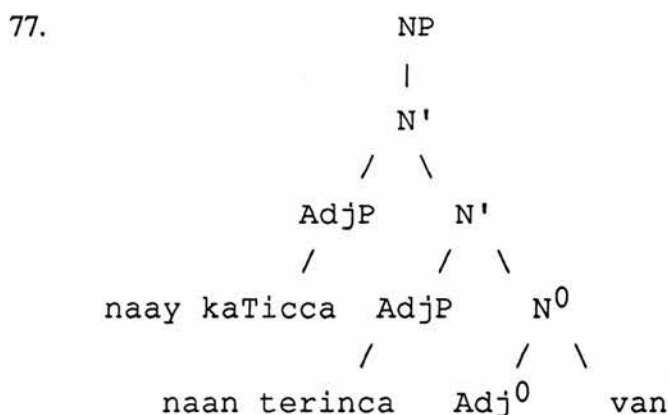
Example 71 is well formed since the inner quality of the man i.e. blindness, is closer to the nominalizer than the other modifier. In other words, individual level modifiers appear closer to the noun, man in this case, than stage level ones. Example 72 is unacceptable because the order has been reversed.

72. ? kannu teri-y-aat-a, neettu
 eye know-y-NEG/TENSE-ADJ yesterday
 va-nt-a-van
 come-PAST-ADJ-PNOML/3 SG MAS/
 (Lit. The one who came yesterday and who is blind)

Additionally, there is another syntactic restriction for the multiple occurrences of modifiers in PNs. If the modifiers are equally heavy, then they can appear in any order, as shown in 73-74. Nevertheless, if one adjectival participle is lighter than the other or a simple adjective accompanies an adjectival participle, then the (heavy) adjectival participle is realized outside the lighter one or the adjective. Example 75 is well formed, but 76 is unacceptable, since the simple adjective occurs outside the adjectival participle.

73. naan teri-nc-a, naay kaTi-cc-a-van
 I know-PAST-ADJ, dog-bite-PAST-ADJ-PNOML/3 SG MAS/
 The one whom I know and who was bitten by the dog (Lit.)
74. naay kaTi-cc-a, naan teri-nc-a-van
 dog-bite-PAST-ADJ, I know-PAST-ADJ-PNOML/3 SG MAS/
 The one whom I know and who was bitten by the dog
75. cay-y-a muTi-nc-a nalla-tu-kal-a(y)
 do-y-INFN finish-PAST-ADJ- good-PNOML/3 SG NEUTER/-PL-ACC
 The good things that can be done,
76. ? nalla cay-y-a muTi-nc-a-tu-kal-a
 good do-y-INFN finish-PAST-ADJ-PNOML/3 SG NEUTER/-PL-ACC
 The good things which can be done,
 (lit. The things which can be done and is good)

These examples illustrate that more than one adjectival participle can appear before the PN suffixes, and that these suffixes are similar to the ordinary nouns in this regard. In other words, the PN suffixes, as functional heads, seem to have two complement type forms, as seen in 77. This behaviour of PN suffixes indicates that they have some properties of nouns.



This tree shows that the PN suffixes can relate to two complement types. Nevertheless, they cannot associate with two syntactic positions of a single input verb, as exemplified in 79.

78. 0_i en-akku puttakam ta-nt-a- van_i
 0_i I/OBL-DAT book give-PAST-ADJ-PNOML_i/3 SG MAS/
 The one who gave me a book
79. * 0_i 0_j puttakam ta-nt-a- $van_{i,j}$
 0_i 0_j book give-PAST-ADJ-PNOML_{i,j}

On the contrary, GNs do not have any of these variations, because the GN suffix acts as a full fledged functional head. Therefore, it cannot have stacked complements similar to that of 77.

This difference between PNs and GNs is parallel to that of functional verbs. It was observed in 6.3.4.1 that the functional verb *kir* 'self benefactive' cannot have multiple verbal participle forms as it behaves as a bound suffix with all the functional properties. Nonetheless, the functional verbs such as *vay* 'keep' and *koTu* 'give' have some properties of lexical verbs and thus, they can have two occurrences of verbal participles.

Fourth, PNs can be pluralized, though it is not possible with GNs. For example,

80. cey-y-a muTi-nc-a nalla-tu-kal-a
 do-y-INFN able-PAST-ADJ good-PNOML/3 SG NEUTER/-PL-ACC
 maTTum cey-y-unka.
 only do-y-IMP/POLITE
 Please, do the good things that you can do.

nallatu, the PN in 80, refers to the objects and hence, they can be pluralized. Yet this is not possible with GNs, since they refer to actions or processes, like the counterpart English gerundive nouns.

To summarize, in this section, the suffixes of PNs have been identified as functional heads. This characterization then led to an exploration of the similarities and differences of PNs and GNs. They have common properties, since they are derived syntactically. Despite these similarities, they differ from each other mainly for two reasons: First, *-atu* does not have a syntactic relation with the arguments of the input verb, though the opposite is true for the PN suffixes. Second, *-atu* is identified as a fully grammaticalized functional category. So it receives only one complement. On the contrary, the PN suffixes are hybrid in nature in that they have both functional and lexical properties.

So far, two types of deverbal nominals, GNs and PNs, have been analyzed, applying the functional category approach to morphology which I have developed. This syntactic account is next employed to examine the properties of VNs.

7.4. Properties of VNs

This section first examines the properties of VNs comparing them to GNs and PNs. Then, it claims that they are idiosyncratic and thus are lexical.

7.4.1. VNs vs GNs and PNs

VNs are, as exemplified in section 2.1.1.1, derived by attaching several suffixes to verbs whereas GNs and PNs are formed by adding respectively only *-atu* and pronominal (*-van*, *-var*, *-val*, *-tu*) suffixes to verbs. Thus, the occurrence of VN suffixes, unlike those of GNs and PNs, is irregular and idiosyncratic.

Implicitly, this indicates that they, as shown in examples 11-18 in 2.1.1.1, cannot attach to all verbs. On the contrary, suffixes of GNs and PNs follow any verb that carries a tense morpheme. One instance of this limitation of VNs is the impossibility of attaching VN suffixes to lexical causative.⁸ The VN in 82 is unacceptable since *-pu* has been added to the lexical causative form of *paTi* 'study'.

⁸. The verbs such as *paTippi*, teach' *terivi* 'inform' which have causative suffix *-vi* (or *-pi*) are called lexical causatives. They are assumed to be lexical as they are confined to a few verbs in ET.

- | | | | |
|-----|--------------------------------------|---|---|
| 81. | paTi-pu
study-VNOML | > | paTippu
Study |
| 82. | * paTi-p-pi-pu
study-p-CAUS-VNOML | > | paTippippu
Making some one to study = teaching |

Further, VN suffixes do not accompany effective verbs. Thus, *-vu* in 83 with *piri* 'separate' is well formed, but it cannot attach to its effective counterpart, as in 84. e.g.

- | | | | |
|-----|-----------------------------|---|---------------------------------|
| 83. | piri-vu
separate-VNOML | > | pirivu
separation |
| 84. | * pirikk-vu
divide-VNOML | > | *pirikkuvu
dividing/division |

Moreover, it is interesting to note that all VN-like nominals that have partial similarity are not true VNs. The nouns in 85 seem to be derived nouns as they are equal to *paTi-ppu* 'studying', *ciri-ppu* 'smiling'. Yet in reality, they are not VNs as there are not verbs such as *neru* 'to make fire' or *ceru* 'to wear on the foot' to which these nouns can be compared.

- | | | | | |
|-----|----|------------------------------------|---|------------|
| 85. | a. | neruppu
* neru
to fire | = | fire |
| | b. | ceruppu
* ceru
to wear | = | sandals |
| | c. | iTam
* iTa
to land, to place | = | place/land |
| | d. | tooTTam
* tooTT
to garden | = | garden |

A similar observation has been made by Fabb (1984:213) for English.⁹ He points out that the nouns given in 86 do not have input verbs, though they look like true derived nouns.

86. appetize-ing
 hearten-ing
 gall-ing
 enterprise-ing

These examples reveal that the occurrence of the VN suffixes is irregular, but those of GNs and PNs are regular and productive.

Secondly, VNs seem to have undergone morphophonological changes such as lengthening or hardening when they are compared to the verbs that have partial similarity. For example, the penultimate obstruent of some verbs, e.g. 87 below, have geminated in the respective VNs. In 88, the penultimate heterogeneous consonant clusters have become homogeneous in the counterpart VNs.

- | | | | | |
|-----|----|------------------|---|----------|
| 87. | a. | elutu-0 | > | eluttu |
| | | write-VNOML/zero | | letter |
| | b. | paaTu-0 | > | paaTTu |
| | | sing-VNOML/zero | | song |
| 88. | a. | tuunku-am | > | tuukkam |
| | | sleep-VNOML | | sleep |
| | b. | virumpu-am | > | viruppam |
| | | like-VNOML | | desire |

The suffixes of GNs (including *-tal* type GNs) and PNs, however, do not affect the forms of the input verbs.

89. elutu-tal
 write-GNOML/tal
 writing

⁹. See also Tait (1991:36), footnote 16 for a similar observation.

90. paTi-kk-ir-atu
study-kk-PRES-GNOML
The fact that (X) studies (Y) (Studying)
91. paTi-kk-ir-a-tu
study-kk-PRES-ADJ-PNOML/3 SG NEUTER/
That which is read,

In addition, examples 89-91 illustrate in a third way in which VNs differ from GNs and PNs. VNs are not semantically transparent and regular whereas the opposite is true for GNs and PNs. Thus, in VNs the same suffix is exploited to give different meanings. The nouns with *-pu* in 92a, b, c, for example, imply respectively an action, a process and an instrument.¹⁰

92a.	paTi - pu a study-VNOML	>	paTippu study	- An action, process of studying
b.	ciri - pu smile-VNOML	>	cirippu smile/laughter	- An act, result
c.	cii - pu comb-VNOML	>	ciippu comb	- An instrument

Contrary to VNs, GNs have predictable, compositional meanings similar to V+ing forms in English, and PNs with *-van* and *-var* have a semantic interpretation equal to actor nominals in English.

Fourth, VNs are similar to any other non-derived (simple) nouns in that they can be modified by adjectives and genitive case marked nouns.¹¹ They can also be input to further derivations or compounding like ordinary nouns. In example 93, a derived noun is modified by an adjective. This is comparable to that of 94 where an adjective modifies a

¹⁰. Fabb (1984:214-215) gives examples from English for this phenomenon. e.g.

The thing created (result):	trimming, cutting
The instrument:	filling, seasoning
The source:	opening, hearing
The location:	dwelling
The patient:	offering

¹¹. Probably, because of this reason, Caldwell calls them verbal derivatives in contrast to verbal (= gerundive) nouns. See Caldwell (1856:432-434).

simple noun. Examples 95-96 in parallel to 97 are two instances where genitive case marked nouns precede VNs.

93. ciitaa-v-ukku nalla paar-vee il-l-a(y).
 sita-v-DAT good look (appearance)-VNOML not to be-1-FN
 Sita is not pretty.
 (lit. Sita does not have a good look)
94. ciitaa-v-ukku nalla puttakam il-l-a(y).
 sita-v-DAT good book not to be-1-FN
 Sita does not have a good book.
95. raani-v-uTTu camay-al nall-aa iru-kk-u.
 Rani-v-GEN cook-VNOML good-ADV be-kk-FN
 Rani's cooking is good.
 (or the food Rani cooked is good).
96. avar-uTTu alay-p-pu nalla-tu.
 he-GEN invite-p-VNOML good-3/SG/NEUTER/PRO
 His invitation is good.
97. avar-uTTu naaval nalla-tu.
 he-GEN novel good-3/SG/NEUTER/PRO
 His novel is good.

On the contrary, GNs and PNs are modified by adverbs.¹² Example 99 is ungrammatical, since the VN is modified by an adverb, and 100 is starred as an adjective precedes the GN.

98. veekam-aa ooTu-r-atu kuuT-aat-u.
 fast-ADV run-PRES-GNOML can-NEG/TENSE-FN
 Don't run fast. (It is not good to run fast)

¹². In general, *-tal* nominals gives habitual meaning. Therefore, they cannot be modified by sentence adverbials like *neettu* 'yesterday'. e.g.

*neettu paTi-ttal
 yesterday study-t-GNOML/tal
 Studying yesterday

99. * veekam-aa ooTT-am kuuT-aat-u.
fast-ADV run-VNOML (race) can-NEG/TENSE-FN
? Fast race is not good.
100. * niinka koTu-tt-a tiir-k-ir-a-tu
you give-PAST-ADJ decide-PRES-ADJ-PNOML/3 SG NEUTER/
nalla-tu.
good-3/SG/NEUTER/PRO.
The decision you gave is good.
101. niinka koTu-tt-a tiir-maanam nalla-tu.
you give-PAST-ADJ decide-VNOML good-3/SG/NEUTER/PRO.
The decision you gave is good.

Fifth, VNs can be compounded along with simple nouns. One diagnostic of this type of compounding is that the initial consonant of the second noun is geminated when the preceding noun ends with a vowel. e.g.

- | | | |
|------|-----------------|----------------|
| 102. | ceruppu+kaTay > | ceruppuk kaTay |
| | sandal-shop | Sandal shop |

Further, the first noun in a compound does not receive case markers. Examples 103-104 are unacceptable, since the compounded nouns have been case marked. Nonetheless, the opposite is true for 105. Note that the final consonant of the first noun in this example has assimilated to the initial consonant of the second.

103. * puttakatt-ay paTi-p-pu
book/OBL-ACC study-p-VNOML
? book study
104. * en puttakam paTi-p-pu
I/OBL-GEN book study-p-VNOML
? My book study,

105. en puttaka-p-paTi-p-pu
I/OBL-GEN book-p-study-p-VNOML
My book knowledge.

The GNs behave rather differently in this regard. They cannot be compounded, and the input verbs of these nouns always assign case to the relevant argument positions. Example 106 is ungrammatical, because a GN has been compounded.

106. * en puttaka-p-paTi-kk-ir-atu
I/OBL book-p-study-PRES-GNOML
? My book-studying.

Sixth, another instance of the parallelism between VNs on the one hand and GNs and PNs on the other is that the former, but not the latter two, can be attached to another derivational suffix to form nouns. In example 107, *kaaran* is attached to an ordinary noun *kaTay* 'shop' to generate the agent noun *kaTaykkaaran* 'shop keeper'. Similarly, the same suffix is added to the VNs *camayal* and *paaTTu* in 108b-109b in order to derive *camaykkaaran* 'cook' and *paaTTukkaaran* 'singer'.

107.		kaTay + kaaran shop - doer	>	kaTaykkaaran shop keeper
108.	a.	camay - al cook - VNOML	>	camayal cooking
	b.	camayal - kaaran cooking - doer	>	camayakkaaran cook
109	a.	paaTu - 0 sing - VNOML/zero	>	paaTTu song
	b.	paaTTu - kaaran song - doer	>	paaTTukkaaran singer

kaaran cannot follow a PN with a PN suffix since this type of deverbal noun already has an agent marker. It cannot appear after a GN, since combining an agent form with a process is logically impossible. e.g.

110. * *paTi-cc-atu-kaaran*
 study-PAST-GNOML-NOML
 * Studyinger

Seventh, GNs and PNs, but not VNs, include the tense suffixes. As exemplified in 111, GNs express habituality when they have the present tense marker or the negative suffix, and are modified by a (universal) time adverb. A time adverb, as shown in 112, cannot modify a VN.

111. *eppavum ciri-kk-ir-atu kuuT-aat-u.*
 always laugh-kk-PRES-GNOML can-NEG/TENSE-FN
 Laughing always is not good. (Lit.)
112. * *eppavum ciri-p-pu kuuT-aat-u.*
 always laugh-p-VNOML can-NEG/TENSE-FN
 ?? Always laugh is not good.
 ?? Always laugh is prohibited.

Eighth, the most striking difference between these two groups of nominals is that the arguments and theta roles of the input verbs of VNs are not realized syntactically whereas those of GNs and PNs are projected into syntax without any change. The noun phrase in 113 is unacceptable, because the VN has two nouns denoting the agent and theme of the input verb *paTi*.

113. * *avan puttakam / puttakatt-ay paTi-p-pu*
 he book / book/OBL-ACC study-p-VNOML
 ? his book studying,

Yet the phrase is acceptable when the VN is replaced by a GN, as shown in 114.

114. *avan puttakam / puttakatt-ay paTi-kk-ir-atu*
 he book /book/OBL-ACC study-kk-PRES-GNOML
 The fact that he studies a/the book (His studying (a/the) book)

This evidence, so far presented, reveals that VNs on the one hand and GNs and PNs on the other have different properties, with the exception that verb stems appear in all

of them. Based on these properties, the syntactic behaviour of VNs is briefly analyzed in the next section.

7.4.2. VNs are lexical

It has been illustrated in the preceding section that VNs are syntactically irregular and semantically idiosyncratic. Given the generally accepted assumption that idiosyncrasy is a characteristic of the lexicon, I assume that VNs are lexical. This assumption is supported by the fact that verbs in GNs and PNs can project their syntactic properties to syntactic trees independently, but those of VNs cannot.

Assuming the functional approach developed in this work, VNs are categorially specified as N^0 and are put in the C-lexicon along with other ordinary nouns.

115. N^0
 |
 paTippu

Accordingly, VNs project as N^0 nodes, like other simple nouns, in the syntax. The verbs in these nouns do not head their own maximal projections and do not have autonomy to project their syntactic properties into syntax. As a result, they function as simple nouns displaying all the properties given in 7.4.1; They are modified by adjectival modifiers and genitive case marked nouns and are compounded as other simple nouns.

This approach also explains the unacceptability of example 103-104. In this complex noun phrase, a noun is projected, presumably to represent the theme of the input verb of the VN, and case marked, without having a proper theta assigner or a case marker.

One may argue, however, that the arguments of the verbs in VNs can also be realized in the complex noun phrases. For example,

116. ata patti en tiir-p-pu on-kal-ukku pirayoocanam
 it about I/OBL(GEN) decide-p-VNOML you/OBL-PL-DAT use
 il-l-a(y).
 not to be-l-FN
 My decision on that is not useful to you.

117. *ata patti en kavan-am*
 that about I/OBL(GEN) attend-VNOML
 my attention/concern about that
118. *vinnaana-p-patti un(kal) ari-vu*
 science-p-about you/OBL(GEN) know-VNOML
 patt-aat-u.
 enough-NEG/TENSE-FN
 Your knowledge of science is not enough.
119. *kooppi-y-ila taan en viruppam iru-kk-u.*
 coffee-y-LOC FOCUS I/OBL(GEN) liking have-kk-FN
 I have a desire for coffee. (It is in coffee where my desire is.)

The verbs *tiir* 'decide' *kavani* 'attend' 'concern' *ari* 'know' and *virumpu* 'like' 'desire' have two arguments, the agent or experiencer and theme. These arguments seem to have been realized within the noun phrases in 116-119 though they are assigned different cases. *virumpu* as a main verb has the experiencer (or the agent of liking) in the nominative case and the theme in accusative case.

120. *naan kooppi virumpu-r-een.*
 I coffee like-PRES-1/SG
 I like coffee.

In 119, these two arguments have been realized respectively as the genitive modifier and the locative adjunct. Thus, it appears that even VNs retain the arguments of the input verbs.

This observation can be dismissed following Grimshaw (1990). She points out that the satellite phrases in resulting nominals (= non-argument taking nominals) are not true arguments, but they are related to the lexico-semantic representation of the input verb. Therefore, unlike true arguments, these argument-like phrases are optional and receive cases different from the true arguments. For example,

121. *muTTaal-tanam-aana cey-al kuuTa.*
 fool-VNOML-ADJ do-VNOML many
 There are many foolish deeds.

122. kanTakTar-ukku en-meela
 conductor-DAT I/OBL-on
 veru-p-pu iru-kk-u.
 dislike-p-VNOML have-kk-FN
 The conductor dislikes me.
 (lit. The conductor has a hatred/disliking of me).

In 121, the verb *cey* 'do' has two arguments, the agent and theme, but none of them are realized in the complex noun phrase that the VN *ceyal* heads. *veru* 'dislike, hate' in 122 also has two arguments. Unlike in the previous case, in this instance there are two nouns in the sentence that are equivalent to the theme and agent of the verb. Yet the theme-like noun acts as a goal or a location, and the agent-like noun functions as the experiencer for both verbs, *veru* and *iru*. This indicates that this type of NP does not represent true arguments of the input verbs of the VNs.

This evidence shows that the verbs in VNs are inactive and are not realized syntactically. Therefore, they function in syntax as simple nouns.

To summarize, this section has described the irregularity and the idiosyncratic properties of VNs. Thus, they are classified as simple nouns and are stored in the C-lexicon. During the syntactic projections, they are inserted to the NP nodes in the syntax. Therefore, the verbs in VNs, unlike those of GNs and PNs, do not have their own maximal projections and are unable to project syntactic properties to the syntactic tree.

7.5. Conclusion

This chapter was devoted to analyzing deverbal nominal morphology in Tamil applying the functional category approach to morphology proposed in chapter 3. First, I sketched the properties of the deverbal nominals in Tamil, e.g. the verbal nouns, the participial nouns, and the gerundive nouns, given in 2.1.1. Second, assuming all bound morphs that have selectional properties are functional heads, the suffixes of participial and gerundive nouns were identified as functional heads. Given these suffixes are functional heads, next, formation of GNs and PNs was illustrated. One of the implicit, but interesting aspect of this chapter is that it has integrated the analysis of verbal morphology into that of nominal morphology. That is because GNs and PNs, as discussed in chapter 2, contain verbal suffixes such as tense and negative. Another important issue is that the analysis illustrated so far treats all suffixes which are regular to be syntactic. In other words, no distinction

has been drawn between inflectional and derivational suffixes. Finally, GNs and PNs were compared to VNs. It was observed that VNs, unlike the former two types of nouns, are irregular morphologically and idiosyncratic semantically. Thus, they were characterized to be lexical and were proposed to represent in the C-lexicon.

The syntactic analysis of morphology presented in this dissertation has further implications. It has referred to syntax without much arguments. Thus, it is worth exploring the nature of syntactic component that has been assumed. Two other significant questions are related to the organization of the lexicon, word formation and the definition of word. These issues will be addressed in the next chapter as concluding remarks.

chapter 8

Implications and conclusions

8.0. Introduction

The study of morphology in Estate Tamil is significant dialectally and theoretically. Dialectally, ET departs from the other Tamil dialects in several respects. One of the peculiarities of this dialect, as shown in 4.2, is the neuter agreement suffix *-atu*. In this occurrence *-atu* agrees with pronouns of the first, second persons and the third person non-honorific nouns. This characteristic of *-atu* is confined only to ET. It is not found in JT or other Indian dialects that I have come across. Further, it was shown in 5.3.3 that ET, unlike JT and IT, does not have direct negation where agreement suffixes directly attach to verb stems to denote negation. Moreover, modal verbs in ET have case properties that differ from those of JT and IT.

In addition to these dialectal differences, the present study of Tamil has several theoretical implications as well. I first sketch a few of these implications of the licensing principles for the theory of grammar in section 8.1. Subsequently, the organization of the lexicon, another area of the grammar that has been referred to very often during the course of the analysis, is described in section 8.2. Finally, I outline several advantages of this study and the areas to be explored.

8.1. The theory of grammar and licensing principles

The morphosyntactic analysis presented in this dissertation has applied two notions, namely the PFLP (PF Licensing Principle) and the MLH (Morphological Licensing Hypothesis). These two have significant consequences for the theory of grammar. This section is thus devoted to sketchy remarks on these effects.

First, Chomsky (1986:98) has suggested that for the requirement of Full Interpretation (FI) at PF and LF, all maximal and non-maximal categories must be properly licensed. It seems that according to Chomsky's formulation, FI functions at PF and LF over word level or phrase level categories. Nevertheless, it was assumed in 3.5.1 that functional categories also must be properly licensed to receive proper licensing. In order to gain this objective I applied the PFLP which insists every syntactic node to be licensed by a phonologically realized category or a trace of a chain at PF. According to this principle the syntactic representations are checked at PF to make sure whether all syntactic nodes are filled by phonetic material, and are rejected, if they are not properly represented. The implication of this assumption is that all syntactic movements must have been completed before PF so that the structure in question is eligible to enter into PF. In this way the PFLP imposes a constraint on the well formedness of syntactic structures.

However, in the standard GB framework PF is mainly concerned about phonological information rather than syntactic ones. Hence, PF is not the domain for a principle which concerns the syntactic well formedness of a structure. LF also cannot accommodate this principle, since this component is mainly concerned with semantic interpretation of the structures. As it is obvious from the preceding discussion, the PFLP is concerned with syntactic nodes and their well formedness. Therefore, one possibility is to assume that the PFLP acts in S-structure which has its main emphasis over syntactic well formedness.¹

Second, the Morphological Licensing Hypothesis is also a condition of well formedness of syntactic structures. It proposes, as exemplified previously, that every morpheme projected into syntax must be licensed by heading its own maximal projection to satisfy the requirement of Full Interpretation. In other words, this hypothesis assumes that there should be parallelism between the morpheme structure and the syntactic structure. After words are formed applying syntactic rules, the internal structure of words cannot be seen overtly unless there are traces of moved categories. In other words, the internal structure of words can be recovered if and only if there are traces of moved morphological categories. Thus, the MLH provides a necessary conceptual means to illustrate the interrelationship between syntax and morphology.

The immediate question to raise, then, is 'where is this hypothesis applied?'. As noted above, PF or LF cannot be the domain of the MLH as they are involved with the

¹. Chomsky (1992) dispenses with the existence of D-structure and S-structure, because they are not conceptually necessary as they are not a part of either the articulatory-perceptual system (AP) or the conceptual-intentional system (CI). I do not intend to discuss or compare the Minimalist Programme with the analysis presented here as it may take us a far from our main concern here. See Joosten (1994) for some discussion on advantages and disadvantages of Chomsky (1992).

phonology and semantics of a structure, but not syntactic movements and morphological licensing. Two possible components remain, i.e. D-structure and S-structure. It has been assumed in the linguistic literature based on the Principle and Parameters framework that D-structure is the level where semantic information and morphosyntactic dependencies are presented. Transformations are assumed to operate on thus generated basic syntactic structures. This implies that the MLH is not a part of D-structure, since it is not sensitive to (or does not regulate) either thematic information or to lexical functional dependencies. Therefore, the only possible domain for the MLH to operate is in S-structure.

Third, when the syntactic derivation is completed, the derived words enter into PF as single words (e.g. flat structures) to observe phonological rules, but they carry their information related to the derivational history to LF in order to receive proper interpretation. For example, when participles and the modality verbs in Tamil (given in 6.3.2) complete syntactic derivations, they enter into PF and receive one stress and behave as single words. Yet they are interpreted at LF according to the morphosyntactic information they carry with them. This behaviour of these levels is comparable if there is a component between the lexicon on the one hand and PF and LF on the other. When this level is assumed to be S-structure, one can suggest that all syntactic operations take place in this level before the structures proceed to observe phonological rules and semantic interpretations. Tamil provides good examples to explain this assumption. After syntactic rule application, in overt syntax, gerundive nouns and participial nouns function as X^0 s, but prior to that the morphemes in these nouns have a rather different syntactic structure. The verb in a PN and a GN is the head of VP in which all the arguments are realized. The tense and adjective suffixes of those nouns have their own maximal projections. Thus, the verb and its arguments are one constituent before the application of syntactic (= movement) rules. Yet when the derivation is completed the verb becomes an immediate constituent of the deverbal noun, leaving thematically related NPs behind. In other words, prior to the syntactic rule application the verb of a PN and of a GN is a part of VP, but when the syntactic derivation is over it is a part of the noun. As a result, in PF, GNs and PNs act as single nouns, but their semantic interpretation is done according to the derivational history represented by moved elements and their traces. This dual behaviour can easily be explained when S-structure is taken to be a necessary level of grammar where syntactic operations (according to the present study the PFLP and the MLH) take place. In this way the present study provides some evidence for the existence and

importance of S-structure as a level of grammar.²

Fourth, according to the analysis presented in the present work, underived syntactic structures do not represent all the information that is realized in well formed syntactic structures. In other words, there is a considerable gap between the underived and derived sentence structures as far as the encoded information is concerned. If these basic structures are assumed to be generated in D-structure that assumption contradicts the proposition that D-structure is the level where all thematic information and lexical functional dependencies are regulated. That is because there can be morphs which have not fully projected their properties to these basic (underived) syntactic structures. This means that in the present analysis syntactic nodes which are not a part of D-structure may emerge during the derivation. Hence, the analysis given here questions the existence of D-structure. Creating syntactic nodes in S-structure which are not presented in D-structure also violates the Projection principle according to which all syntactic properties must be present in all levels of the grammar, D-structure, S-structure, PF and LF. Therefore, D-structure, as far as the present study is concerned, is considered not to be a part of grammar.³ Consequently, I suggest that S-structure is a necessary level of the grammar, and the X-bar schema and the licensing principles hold in this level.

Having given a few implications of the work presented here, next I will move on to describe lexicon, another component of the grammar, that has been constantly mentioned. This discussion is necessitated by the fact that it gives some insight into the nature of lexical and functional categories.

8.2. Lexicon

In chapter 3, two lexica, the C-lexicon and the F-lexicon, were hypothesized for the theory of grammar. In the linguistic literature there have been many assumptions made about the lexicon. Yet a little formalization of the information structure of lexicon has been given.⁴ Thus, sections 8.2.1. and 8.2.2. outlines the nature of these two lexica.

². If these claims that the PFLP and the MLH are the conditions of S-structure is true, then even within the Minimalist framework S-structure can be a level of the grammar. That is because Chomsky states that " the basic issue is whether there are S-structure conditions. If not, we can dispense with the concept of S-structure" (P. 33).

³. Cann (1993a) argues for the existence of D-structure as a necessary level of the grammar assuming co-indexing between the specifier and the head takes place in this level. Also, see Cann (1993b) and Cann and Tait (1994).

8.2.1. C-lexicon

The C-lexicon consists of lexical categories and their encyclopaedic information. For Tamil, the only lexical categories are verbs and nouns; almost all adjectives are derived forms and hence are not included in the lexicon. The information structure of lexical categories includes the category, argument structure, phonological information, case properties and idiosyncrasies. The subsequent subsections examine these properties of lexical categories.

8.2.1.1. Categorical information

In the lexicon, all lexical elements are given a category label. Some lexical entries are simpler than others. The lexical entry in 1-2 is a sample of the lexical entry for *poo* and *taay*.

1. poo: < poo 'go'; V >
2. taay: < taay 'mother'; V >

Some lexical elements belong to more than one category and have complex structure. Thus, in the entries for such lexical items sublexical entries are encoded within the curly brackets to represent different categorial specifications. The curly brackets indicate that one category is projected at a time. The lexical entries for *aTi* and *canti* in 3-4 exemplify this type of complex structure.

- 3.
- | | | | | |
|--------|-----|-------------------------|---|---|
| aTi: | < { | < aTi 'hit'; V > | } | > |
| | | < aTi 'blow'; N > | } | |
| canti: | < { | < canti 'meet'; V > | } | > |
| | | < canti 'junction'; N > | } | |

⁴. Zubizarreta (1987) presents a detailed account on this issue within the GB framework. See also Tait (1991).

The same schemata can be applied to introduce paired verbs which have transitive and intransitive forms. Representation of these verbs is rather difficult since the lexical entries for paired verbs, unlike those in 3, are associated with two forms. There seem two possibilities for formulating lexical entries for these forms.⁵ One is to consider the common part of the pair as the introductory form. e.g.

$$4. \quad \text{tiru:} \quad < \left\{ \begin{array}{l} < \text{tirumpu ...} > \\ < \text{tiruppu ...} > \end{array} \right\} >$$

The second is to present both forms as introductory forms.

$$5. \quad \text{tirumpu/tiruppu} \quad < \left\{ \begin{array}{l} < \text{tirumpu ...} > \\ < \text{tiruppu ...} > \end{array} \right\} >$$

The lexical entry in 4 seems to indicate that *tirumpu* and *tiruppu* are derived from the root *tiru*. This is an undesirable implication since I assume that paired verbs are non-derived verbs.⁶ Therefore, I dismiss the representation in 4, and prefer instead the following lexical entry for paired verbs to the one in 4.

$$6. \quad \text{tirumpu/tiruppu} \quad < \left\{ \begin{array}{l} < \text{tirumpu 'turn'; V} > \\ < \text{tiruppu 'turn'; V} > \end{array} \right\} >$$

8.2.1.2. Argument structure

Argument structure of an element also appears in the lexical entry. Arguments are of two types; direct arguments and indirect arguments.⁷ Agent, theme and goal are direct arguments and express grammatical functions such as subject, direct object and indirect

⁵. See Marantz (1984:179-192) for a different representation of lexical trees. He exemplifies anti-causative verbs in English in tree-like structures.

⁶. See Asher (1982:202), Kandiah (1967) for similar approaches.

⁷. See Marantz (1984:15, 17ff) and Zubizarreta (1987:14ff, 34ff) for a similar classification.

object. Other semantic roles, e.g. source, location, instrument are called indirect arguments. Following Cann (1993b) the argument structures of *poo* and *koTu* are formulated as 7-8.

7. *poo*: < *poo* 'go'; V; (X); Theme:x, Goal, Source >

8. *koTu*: < *koTu* 'give'; V; (((Z)Y)X)); Agent:X, Theme:Z, Goal:y>

This representation illustrates the hypothesis that some arguments are linked with theta roles, but others are not. The arguments which are linked to semantic roles are identified as direct arguments and others are assumed to be indirect arguments. These assumptions, i.e. assuming two types of arguments and linking direct arguments with theta roles, have far reaching consequences. Direct arguments must be present before syntactic derivation because lexical verbs project their arguments into syntax in this level. However, there is no such requirement concerning the indirect arguments, and so they are realized after the derivation. When theta theoretic notions are applied, this behaviour of arguments entails that the direct arguments are obligatory, while indirect arguments are not. Thus, the direct arguments occupy theta positions in a syntactic tree whereas the indirect arguments function as adjuncts.

Next, the properties of linked arguments, as Cann (ibid) observes, can be recoverable 'by some interpretation procedure' even when they are omitted. One implication of this assumption is that unlinked arguments cannot be omitted. This assumption can be applied to explain the behaviour of the omitted NPs in Tamil. In Tamil, not only the agent, but also any argument can be dropped without causing ungrammaticality. This may be the case that the arguments are linked, and hence are recoverable.

8.2.1.3. Case features

Lexical entries may also contain case features, especially when they have peculiarities related to case. Tamil provides good examples in this regard. For example, *eeru* 'climb' in 9 has a goal argument in the locative case.

9. *naan maratt-ila eer-in-een.*
 I tree/OBL-LOC climb-PAST-1/SG
 I climbed the tree.

This instance of locative case is a peculiarity since in general the goal argument appears in the dative case. Thus, this information has to be specified in the lexical entry of *eeru* with its argument structure. Thus,

10. *eeru*: < *eeru* 'climb'; V; (X); Agent:X, Goal
|
LOC >

piri 'separate' is another example where the indirect source argument appears in the accusative case.

11. *raaman ciitaa-y-a(y) piri-nc-aan.*
Rama Sita-y-ACC separate-PAST-3/SG/MAS
Rama separated from Sita.
12. *piri*: < *piri* 'separate'; V; (X); Theme:x, Source
|
ACC >

More idiosyncrasies related to case are found in the modal verbs. The experiencer argument of modal verbs takes different cases. *teri* 'know', for example, has an experiencer subject with the dative case whereas *muTi* 'can' in standard Tamil takes an NP with the ablative case marker as the subject. More interestingly, in ET *muTi* requires a dative experiencer subject.

13. *en-akku teri-y-um.*
I/OBL-DAT know-y-FN
I know (it).
14. *en-n-aala liivu eTu-kk-a muTi-y-um.*
I/OBL-n-ABL leave take-kk-INFN can-y-FN
I can take leave.

15. en-n-ooTa on-akku var-a muTi-y-um.
I/OBL-n-SOCI you/OBL-DAT come/OBL-INFN can-y-FN
You can come with me.

These case properties must be specified in the lexical trees as they are confined to these particular verbs.

16. teri < teri 'know'; V; ((X)Y); Expe:Y, Theme,
 |
 DAT >
17. muTi < muTi 'can'; V; ((X)Y); Expe:Y, Theme:X
 |
 ABL/DAT >

Further, some intransitive verbs have theme and source arguments where the latter appear in the dative case.

18. kaatt-ukku kola aaT-utu.
wind-DAT leaves move-3/SG/NEUTER/PRES
The leaves move for wind.
(lit. To wind Leaves move).

Thus, the source argument of *aaTu* is given a dative case in the lexical entries.

19. aaTu < aaTu 'move'; V; (X); Theme:X, Source
|
DAT >

These observations show that different arguments require various types of case features, and in some cases, the same case suffix occurs with nouns that express different arguments. Therefore, these peculiarities must be included in the lexical trees.

8.2.1.4. Phonological information

It has been proposed in the literature (Speas (1990:9), Chomsky (1986)) that the phonetic form of lexical items must be given in the lexical entry. In addition to this, some other phonological features seem to be specified. As far as Tamil is concerned, syllable structure is one of such instances.

Indicating syllable structure in a lexical tree is particularly important in Tamil since formation of the oblique bases of verbs is based on the syllable structure. As observed by Christdas (1988:302, 430ff), verbs that have an extra skeletal structure form oblique base forms adding *-k* or *-kk*. e.g.

- 20. paTi-kk-ir-een.
 study-kk-PRES-1/SG
 I study.

- 21. poo-k-utu.
 go-k-3/SG/NEUTER/PRES
 It is going.

- 22. keel-k-a (=keek-k-a)
 ask-k-INFN
 To ask

Further, the tense suffixes of class 2 verbs are sensitive to the syllable structure, as shown in 4.3.1. The past tense suffix *-T*, for example, is attached to the penultimate *-T* of verb stems that have one of five types of syllable structures. Thus, the past tense form in 23 is accepted, but the one in 24 is not.

- | | | | |
|-----|--------------|--------------------------|----------------------------------|
| 23. | VC-CV-CV | ampuTu
to be included | ampuT-T-aan.
He was included. |
| 24. | CV-CV-CVV-CV | vilayaaTu
to play | *vilayaaT-T-aan.
He played. |

The specification of syllable structure is significant as it provides necessary information for the selections of the tense suffixes.

8.2.1.5. Idiosyncratic properties

Morphological idiosyncrasies must also be given in the lexicon. The question arises concerning where this information is recorded. There are two possible approaches.⁸ First, idiosyncrasies can be encoded on stems, listing all possible affixes they can attach to. Second, they can be specified on affixes. One may prefer the latter to the former since constraints on suffixes affect the syntactic structures that they form. In other words, specifying idiosyncrasies on the suffixes is appropriate as functional categories direct the syntactic structures.

However, as far as Tamil is concerned, both approaches seem to have some advantages. That is because some idiosyncrasies in Tamil are not related to affixes. As an alternative these lexical irregularities can be encoded in the lexical trees.

Nouns ending with *-m*, *-t*, and *-r* provide good examples for this observation. These nouns change their final consonant into *-tt* to form the oblique bases when they attach to the case suffixes.

25.	Noun	Oblique base	N-OBL-CASE
	maram	maratt-tt	maratt-ukku
	tree	tree-OBL	tree/OBL-DAT
	cooru	coo-tt	coott-ukku
	rice	rice-OBL	rice/OBL-DAT
	vaaratu	vaara-tt	vaaratt-ukku
	coming	coming-OBL	coming/OBL-DAT

On the contrary, they do not form the oblique base forms when they precede the plural suffix *-(n)k(l)*. e.g.

26.	Noun	N-PL	N-PL-CASE
	maram	maram-kal	maram-kal-ukku
	tree	tree-PL	tree-PL-DAT

Example 26 shows that the generation of oblique bases of these nouns is idiosyncratic. This idiosyncrasy cannot be attributed to the case suffixes since they do not require

⁸. See Tait (1991:22) for some discussion.

oblique bases when they follow other nouns. Therefore, it is appropriate to specify the peculiarity related to the formation of the oblique base in the lexical trees of the *m*, *t* and *r* final nouns.

Further, verbs such as *vaa* 'come' *taa* 'give' have irregular forms when they precede the infinitival suffix. e.g

27.	<i>vaar</i>	<i>var</i>	<i>var-a</i>
	come	come/OBL	come/OBL-INFN
	<i>taa</i>	<i>tar</i>	<i>tar-a</i>
	give	give/OBL	give/OBL-INFN
	but,		
	<i>alu</i>	--	<i>alu-a</i>
	cry	--	cry-INFN

These types of irregularities are given in the lexical trees as they are not related to the suffixes.

Additionally, lexical trees may list encyclopaedic information related to context, pragmatics and semantics. This type of encyclopaedic information is not pursued here since such an illustration results in a long descriptive account which is not relevant for the present purpose. Instead, the information structure of functional categories is sketched next.

8.2.2. Functional categories

Functional heads, in parallel to lexical categories, are specified for three types of information, namely categorial information, selectional properties, and idiosyncratic rule application.

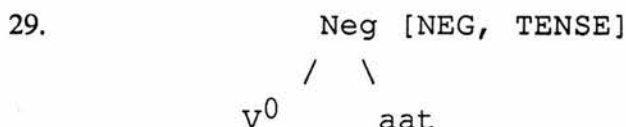
8.2.2.1. Categorial information

It has been assumed that functional heads have selectional properties and hence, they are presented in the lexicon in tree-like structures. These trees consist of two nodes, one for the suffix in question and the other for the category specification of the stem selected by the suffix. The categorial information of a functional head is specified on the branching node. The right node in the F-tree of tense, given in 28, represents the suffix; the left node gives the stem form and the branching node shows the category of the tree. Thus,

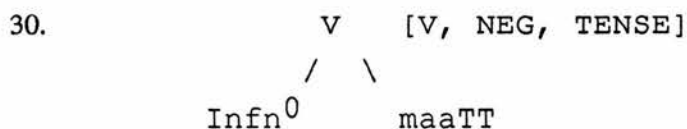
functional trees differ from lexical entries, given in 8.2.2.1, which are unordered sets of information.



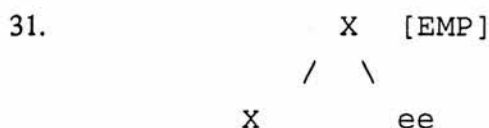
Further, it has been noted that some morphs are syncretized forms of several morphemes. In such an instance, the functional tree is categorized for one of the morphemes which differentiates the functional tree in question from the others. For example, *-aat*, the negative suffix, has two morphemes, 'negative' and 'tense'. As tense is realized through a set of separate suffixes the F-tree for *-aat* is categorized as NEG. Another obvious reason for characterizing *-aat* as NEG, but not T(ense), is that it cannot substitute for other tense suffixes. Once a multimorphemic suffix is specified for the category the morphemes included in the morph are given next to the categorial specification.



In the same spirit *maaTT*, the negative auxiliary verb, is specified for V and given its morpheme structure next to the categorial specification.

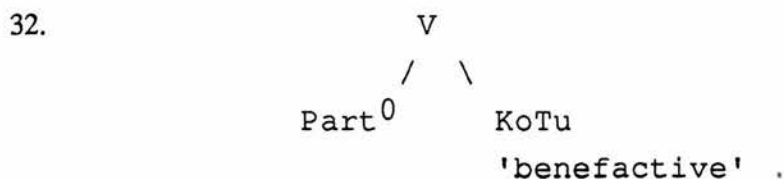


In addition to these, there is a set of morphemes that deviates from headed-functional categories. These are clitic type suffixes which combine with several categories. This property of these suffixes indicates not the richness of selectional properties, but the lack of them. Thus, invoking the assumption that the basic property of functional heads is their ability to select a complement, clitic type morphemes are not characterized as functional heads. Also, they do not have other functional properties given in 3.2, except that of being bound morphemes. Obviously, they are not lexical items either. So, they are considered to be non-head functional categories and are presented in the F-lexicon with no stem category and a category label.

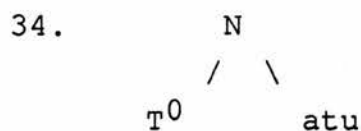
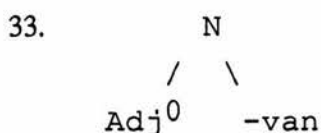


These non-head functional categories do not participate in generating basic syntactic structures as they do not have an information structure parallel to that of headed-functional categories. Therefore, they attach to word boundaries in (overt) syntax.

It is interesting to note that some F-trees have V and N as category labels due to the fact that some verbs and nominal suffixes have functional properties. The attitudinal verbs given in 6.3.1.2, for example, have selectional properties and behave as bound morphemes. Therefore, I have argued that they are functional verbs and are presented in F-trees with the category label V.



Similarly, the suffixes of GNs and PN, discussed in 2.1.1.2, (also in 7.1 and 2.1.1.3, (also in 7.2) are characterized as functional heads and are categorized as nouns.

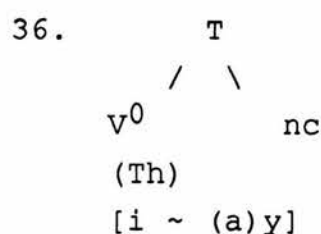
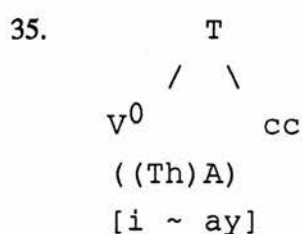


These assumptions, together with the observations made in chapters 6 and 7 that attitudinal verbs and the nominalizers exhibit the properties of functional categories to varying degrees, lead to a further conclusion about the nature of the two lexica: the lexica have a flexible relationship in that some elements can pass from one lexicon to the other.

This section so far has illustrated the categorial information of suffixes. F-trees also specify selectional properties, which I turn to discuss next.

8.2.2.2. Selectional properties

The ability to select a complement category has been assumed to be the basic property of functional heads. Thus, in an F-tree the category of the complement that the functional head takes in the syntax is marked. In addition to category selection, an F-head may also select the argument structure and the phonological properties of the stem form. The past tense suffixes *-cc* and *-nc* provide good examples for this assumption. These two suffixes are similar in that they select verbs as the stem category. However, they differ according to their selection of arguments. *-cc* selects a verb with agent and theme arguments, whereas *-nc* is subcategorized for a verb with a theme argument only. These tense suffixes exemplify phonological selection as well in that *-cc* and *-nc* select verbs with final *i* or *(a)y*.⁹

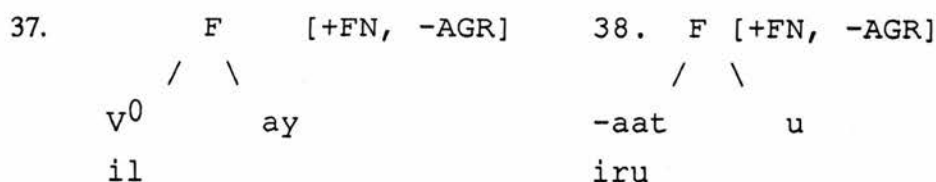


Nevertheless, it is noteworthy that functional heads select a particular argument structure and phonological form only when they have a lexical category as the complement. This may mean that functional categories select lexical complements with a specific argument structure.

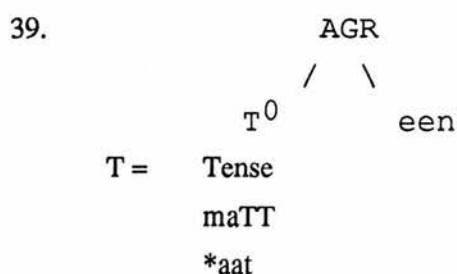
8.2.2.3. Idiosyncratic properties

Section 8.2.1.5. indicated that idiosyncrasies that concern functional categories can be specified in F-trees as well as F-heads are also not free from irregularities. The finite markers *-u* and *-ay*, for instance, select only a very restricted number of stems. *-ay* always occurs with the negative verb *il-* 'not to be'. *-u* follows either the negative suffix *-aat* or the existential verb *iru*. Thus, they have to be lexically specified in the relevant F-tree.

⁹. See for more informations chapter 4.



Agreement suffixes provide another instance of irregularity. These suffixes attach only to the tense suffixes or to a morph with a syncretized tense morpheme with a specific time reference. Hence, they follow tense suffixes and the negative auxiliary verb *maTT* which has the specific time reference [+FUTURE]. Nonetheless, they do not follow the negative suffix *-aat* because this suffix has a mixed time interpretation [+PAST, +PRESENT]. Therefore, the F-trees for the agreement suffixes include these idiosyncratic properties as well.



These examples show that the idiosyncrasies of functional heads have to be marked on the functional trees. Further, this approach implies that when new words are introduced to the lexicon the idiosyncratic information of the affix in question has to be amended. As a result, the list of possible stems that an affix may attach to can be long because the stems are many in number.

To summarize, this subsection has illustrated the information structure of lexical and functional categories. Lexical categories have categorial properties, argument structure, phonological properties, case features and idiosyncratic properties. Functional categories include categorial, selectional and idiosyncratic properties. Lexical entries appear in the C-lexicon as an unordered list of encyclopaedic information whereas F-trees have tree-like binary branching structures. The main difference between the lexical and functional categories is, as previously mentioned, that the latter have selectional properties specified in their trees, but the former do not. Therefore, F-trees are projected to the syntax to generate underived syntactic structures, but lexical categories are merely inserted at the already existing nodes.

So far in this chapter, the nature of two components of grammar has been described. First, some of the implications of the present study were described. The main claim is that the licensing principles hold in S-structure, and therefore, S-structure is significant in the theory of grammar. Second, the information structure of the two lexica was discussed.

Having discussed the implications of the present study and the nature of the lexicon, the rest of this chapter is devoted to showing some advantages of the morphosyntactic analysis presented in this work. First, I examine the consequences of the morphosyntactic analysis of Tamil. Second, I sketch the effects of the present study for the difficult problem of defining word and the question 'Where's morphology?'. Finally, I move to outline the areas where further research is needed.

8.3. Advantages

This dissertation has illustrated syntactic word formation, assuming bound morphemes with selectional properties to be functional heads. It has been hypothesized that functional categories direct syntactic structures depending on their selectional properties and the relative (linear) order of the morpheme structures. The projection of morphemes has been assumed to be determined by the dependencies between the lexical and functional categories. In other words, an assumption has been made that the linear order of the morphological categories mirrors the relative order of the projections of morphemes. In this way, the analysis developed here has shown the interrelationship between word structure and the syntactic structure and the interaction between syntax and morphology.

Further evidence for this relationship has been drawn from the requirement of licensing. Some morphs have been observed to be the syncretized forms of several morphemes. During the projection of this type of suffix, the morpheme that is consistent with the lowest possible position of the relative order of morphemes projects to the syntax first. It was proposed that other syncretized morphemes must be licensed in their head positions to receive Full Interpretation. In order to fulfil this requirement extra structures are built above the existing ones, and the suffixes in question are moved to the head positions of these phrases to license the morphemes in question. In this way not only the initial projection of the suffixes, but also creating additional maximal projections for licensing syncretized morphemes in the syntax builds the syntactic structures. Thus, the present analysis shows the interaction between the word structure and the syntactic structure.

Licensing morphemes in the head positions of syntactic trees also makes the implicit morphosyntactic properties of lexical and functional elements explicit. For example, *-aat*, the negative suffix, does not accompany *maaTT*, the negative auxiliary verb, but it does follow the lexical negative verb *il*. This behaviour of *-aat* is accounted for by the proposal that *il* is a main verb with the meaning 'not to be', and that *maaTT* is a morph with syncretized morphemes, i.e. a verb stem, negation and tense. *-aat* cannot be attached to *maaTT* since this would cause problems for licensing. That is because two instances of a morpheme cannot be licensed in one head position. Yet *-aat* can follow the lexical negative verb since *il-* does not have [+NEG] as a syntactic property. Therefore, when *-aat* is attached to *il-*, the negative morpheme of *-aat* can properly be licensed in its head position without violating the licensing principles.

The approach developed so far has the advantage of avoiding all the difficulties related to the split morphology discussed in 2.3.2.1. It has been noted there that the split morphology is problematic to GNs and PNs since these deverbal nouns have inflections inside derivations. To account for cases such as this, one has to assume two types of rules within the Lexicalist framework, namely lexical rules and syntactic rules, and to give different values to the suffixes in question. For example, if GNs and PNs are derived lexically, then the inflectional suffixes in them must be derivational. However, the same suffixes should be characterized as inflectional when they occur in inflected verb forms.

In order to avoid this disjunction in these instances one can assume the Strong Lexicalist Hypothesis following Lieber (1981), Selkirk (1982) and Di Sciullo & Williams (1987). The problem with generating both inflections and derivations in the lexicon is that such an analysis may not explain how syncretized morphemes are syntactically licensed. The functional approach to morphology does not assume any such dichotomy between inflections and derivations and treats all bound morphemes as functional categories. It also does not recognize a distinction between syntactic and lexical rules, as all words are assumed to be generated in the syntax. The advantage of this approach is that once the theory of split morphology is abandoned, all the related problems disappear.

Syntactic word formation also has the capacity to explain the differences between VNs on the one hand and GNs and PNs on the other. The verbs in VNs cannot project their properties into syntax since they are not projected into syntax independently. The opposite is true for the verbs in GNs and PNs. As a result, these verbs carry their arguments and theta roles with them to syntax. As pointed out in chapter 2, it is not clear how the lexical word-formation theories would explain these differences between the different types of deverbal nouns. Hence, syntactic word-formation is favoured over the lexical hypothesis.

Further, as shown below, the functional category analysis of morphological categories provides a good framework for the description of the traditional criteria for wordhood such as uninterruptability, positional immobility and having one stress, that determine wordhood.

Verbal or nominal forms derived in the syntax cannot be interrupted since such an intervention violates the selectional requirements of the functional heads. An ideal example comes from the attitudinal verbs. The existential main verb *iru* can be separated from the preceding lexical item by inserting another element, but it is not possible with the auxiliary (or functional) *iru*. e.g.

40. *tampi caappiT-Tu kiTTu iru-nt-aar.*
 brother eat-PART KITTU be-PAST-3/SG/HP
 The brother was eating (something).

41. *tampi caappiT-Tu kiTTu-ee iru-nt-aar.*
 brother eat-PART KITTU-EMP be-PAST-3/SG/HP
 The brother was eating (something) (without stopping for some time).

42. *tampi inkee va-nt(u)-iru-nt-aar.*
 brother here come-PART-be-PAST-3/SG/HP
 The brother has come here.

43. * *tampi inkee va-nt-ee-iru-nt-aar.*
 brother here come-PART-EMP-be-PAST-3/SG/HP
 The brother has (EMP) come here.

In 41 the suffix *kiTTu* and the main verb *iru* can be separated by the insertion of the emphatic marker *-ee*. In the same way auxiliary *iru* has been separated from its complement in 43. Unlike in 41, in this instance the sentence is unacceptable as the complement requirement of *iru* is not satisfied.

Immobility of the constituent parts of words can be explained from two theoretical points of view. First, according to the A over A Principle (Chomsky (1968:43)) movement rules can be applied to the highest node of a constituent, but not to the parts of a constituent. Thus, moving a part of a constituent results in a violation of this principle. As far as the approach assumed in the present work is concerned, removing a part of a

constituent results in stranded suffixes violating the PF-Licensing Principle. (See Chapters 3 and 4 for more details).

The fact that a word has one primary stress can be exemplified by the attitudinal verbs. These verbs as auxiliaries behave like bound morphemes. Therefore, when they are attached to a verbal participle the two forms function together as a single unit and receive one stress (see 45 below). Nevertheless, when the main verb counterpart follows a verbal participle these two verbal forms are stressed separately and act as two words (see 44).

44. appaa inkee va-ntu iru-nt-aar.
 father here come-PART be-PAST-3/SG/HP
 Having come father stayed here.

45. appaa inkee va-nt-iru-nt-aar.
 father here come-PART-be-PAST-3/SG/HP
 The father has come here.

In addition to these advantages the syntactic analysis of morphemes has some effects over the two issues highlighted in chapter 2. That is, the notion 'word' and the question 'Where's morphology?'. I turn now to examine them next.

8.4. Word and Where's morphology?

All theories of word formation have assumed, implicitly or explicitly, intuitively or empirically, the existence of the category 'word'. In this dissertation, I have assumed the existence of three types of word, namely, lexical word, syntactic word and phonological word, though defining word has not been my primary interest. The lexical words are X^0 s that are not bound morphemes. They are thus able to head X^0 positions and project their own maximal projections. Syntactic words are generated by combining lexical and functional heads through head movement. GNs and PNs and inflected verbs exemplify this type of word. GNs have verb stems, tense suffixes and nominalizers. PNs consist of a verb stem, tense suffix, adjectival suffix and a nominalizer. They are more complex than GNs since the PN suffixes may have multiple complements. For example, in 46 *-van* is related to two adjectival participle forms, *kaTicca* and *terinca*. *-van* with these two

adjectival participles constitute two discontinuous syntactic words.¹⁰

- 46a. naan teri-nc-a, naay kaTi-cc-a-van
 I know-PAST-ADJ dog bit-PAST-ADJ-PNOML/3 SG MAS/
 ? The one who I know and whom the dog (has) bitten

- b. naan terinca
 naay kaTicca
- } -van

Phonological words are those that act as single phonological units having one primary stress. *vantirunteen* in 45 is one word whereas *vantu irunteen*, in 44, is two words. The syntactic words in 46 are rather problematic for this criterion. When stress is taken to be the main characteristic of a phonological word, the discontinuous relationship that is seen in 46 cannot be maintained. So, *kaTicca* and *terincavan* in 46 are treated as two words.

Characterizing three types of words indicates two important aspects of morphology. First, it is beneficial to identify *words* according to their syntactic, semantic and phonological properties, rather than defining them. Researchers have tended to classify *words* in this way since defining a single category of word, as shown in 2.2, is rather difficult. Di Sciullo & Williams (1987), for example, identifies three types of forms; morphological objects, syntactic atoms and syntactic words. Spencer (1991) assumes lexeme, word form, morphosyntactic word and phonological word.

Second, assuming three sorts of words shows that the lexicon, syntax, and PF are all active in word-formation. The lexicon is not, as assumed by some linguists, e.g. Baker (1988), the storage of idiosyncrasies in the theory of morphology. Yet it is active in the sense that it provides all necessary syntactic, semantic and phonological information for word formation. Syntactic rules operate over the trees formed in the syntax and generate well formed words. PF is the level where words formed in syntax receive their morphophonological properties such as stress.

This observation indicates that morphology is not restricted to one single component of grammar as assumed by researchers who adopt the Lexicalist Hypothesis. Instead, morphological categories, free and bound, are active in the lexicon, the syntax and

¹⁰. Di Sciullo & Williams (1987) also identify syntactic words. According to them syntactic words are the phrases reanalyzed as X^0 categories. In the present approach the syntactic words are those derived as X^0 categories by applying syntactic rules.

the phonological component. Thus, the answer to the long-standing question 'Where's morphology?' is 'morphology is everywhere' in the grammar. This conclusion contrasts with that of Jensen & Jensen (1984) and Scalise (1986), but it is compatible, in some sense, with the approach taken by Spencer (1991), Marantz (1984), among others.

8.5 Areas to be explored

The analysis developed in this work has addressed several important topics of Tamil morphology. Application of functional category approach and licensing principles to morphology has provided an opportunity to discover the syntactic behaviour of morphological categories. One of the significant findings is that the functional categories have varying degrees of functional properties. Some elements are fully fledged functional heads while others have many lexical properties. Another observation is that many suffixes in Tamil are syncretized forms of multiple morphemes. These morphemes build syntactic structure(s) by licensing morphemes in their head positions. This behaviour of suffixes shows the interaction between morphology and syntax.

However, there are many interesting and noteworthy topics that have not been discussed in previous chapters. First, the syntactic effects of the structures proposed in this analysis remain to be explored. Second, the syntactic aspect of the derivation of PNs was not explained. It was observed that PNs, unlike relative clauses in English, may have multiple adjectival participles, and do not have relative pronouns. Thus, the derivation of PNs is rather complex and problematic. Third, the lexical side of morphology is worth studying. In section 8.2., the information structure of the lexical and functional elements was described, but this is not an exhaustive account that can explain the nature and the organization of the lexicon. Fourth, analyzing the properties and behaviour of paired verbs and derived nouns, in more detail, will shed light on some dark corners of morphology. All these questions are left open for future scholarship.

Appendix

This informal statement is based on an informal test carried out during my field work. The procedure of the test is as follows.

Step 1. I listed minimal pairs of nasals, laterals, and trills which are considered to be phonemic in other Tamil dialects or those which have different characters.

Step 2. Two native speakers (K. Punitaraja and A. Satyasilan) were asked to pronounce these pairs of words and sentences first as they speak them in their normal speeches (without giving any attention to the distinction of the relevant letters). Secondly, they were asked to read the list giving considerable amount of attention to the relevant letters, i.e. nasals, laterals and trills. Each speaker was given a chance to do this exercise; and the four recordings were done. Then, the order of the word list was changed and the first speaker was asked to do the same exercise once more with this new list.

Step 3. Two weeks later, four native speakers (K. velayutham, A. Satyasilan, V. Muttucami, L. Marutay and in one case K. A. Sellayya all of whom have literacy) were asked to write those words/sentences while listening to the tape. At the end of this test one of the informants (L. Marutay) was asked to pronounce the word list in a different order and others were told to write them down.

Step 4. The papers were collected and marked. The result is as follows: (Total = number of words written down, Correct = number of correct answers)

Informant:	1.	Muttucami	2.	Marutay				
	3.	Satyasilan	4.	Velayutham				
	5.	Sellayya.						
			1	2	3	4	5	
Test 1 = Satyasilan, spoken style								
Total			50	47	52	52	--	
Correct			06	27	52	40	--	
Test 2 = Satyasilan, literary style								
Total			52	52	52	52	--	
Correct			15	28	52	40	--	
Test 3 = Punitarajah, spoken style								
Total			50	49	51	51	--	
Correct			20	20	49	21	--	
Test 4 = Punitarajah, literary style								
Total			52	48	52	52	--	
Correct			14	05	45	35	--	
Test 5 = Satyasilan, mixed order, spoken style								
Total			52	52	52	52	--	
Correct			24	15	27	29	--	
Test 6 = Satyasilan, mixed order, literary style								
Total			52	52	50	50	--	
Correct			26	26	43	25	--	
Test 7 = Maturay, second mixed order, spoken style								
Total			--	52	52	52	51	
Correct			--	31	28	27	32	

This result shows very interesting facts about the test and the phonemic status of the tested nasals etc.

1. The Satyasilan recognizes his own pronunciations 100% accurately, but when he is confronted with others' pronunciations he gets into difficulties and his accuracy there falls down from 100% to 85% to 54%. Velayutham accurately recognizes 77% maximum in the first two tests and 53% in the rest of the tests. Other two speakers marked correctly 60% maximum and 12% minimum. Sellayya, on the spot speech recognition shows 61% accuracy. In many cases this percentage falls roughly about 50%. This makes me to conclude that the accuracy level depends on the random choices of the sounds. This

shows native speakers do not identify these sounds with phonemic value. Hence, I conclude that tested sounds do not have phonemic values in this particular dialect.

2. In this test, however, two obvious shortcomings can be seen.

a. The recordings were not good enough to use in any of the laboratory tests since they have a lot of background noises.

b. One can argue the speakers (probably Muttucami and Marutay being not well-educated people) may have recognized the differences, but were unable to write them accurately. This argument cannot hold for other participants in this test. So, this argument seems a very weak one.

More research needs to be done in this regard before reaching a definite conclusion.

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